

TRANSNET



**STANDARD TERMS AND CONDITIONS OF CONTRACT
FOR THE PROVISION OF SERVICES TO TRANSNET**

**FORM US7 – SERVICES
Revised August 2008**

“PREVIEW COPY ONLY”

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SCHEDULE 1 - SCHEDULE OF REQUIREMENTS and / or WORK ORDER/S

SCHEDULE 2 - ADDRESSES FOR NOTICES

SCHEDULE 3 - NON-DISCLOSURE AGREEMENT

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1. INTRODUCTION

When an Agreement is entered into between Transnet and the Supplier of Services to Transnet, these Standard Terms and Conditions of Contract, the General Tender Conditions, a Schedule of Requirements and/or Work Order(s) including such special conditions as applicable, and any terms in the associated tender documents, exclusively govern the provision of Services by the Supplier to Transnet.

2. DEFINITIONS

Where the following words or phrases are used in the Agreement, such words or phrases shall have the meaning assigned thereto in this clause, except where the context clearly requires otherwise:

- 2.1. **"AFSA"** means the Arbitration Foundation of South Africa;
- 2.2. **"Agreement"** means the Agreement and its associated schedules and/or annexures and/or appendices, including the Schedule of Requirements and/or Work Order(s), specifications for the Services and such special conditions as shall apply to the Agreement, together with the General Tender Conditions and any additional provisions in the associated bid documents tendered by the Supplier (as agreed between the Parties), which collectively and exclusively govern the provision of Services by the Supplier to Transnet;
- 2.3. **"Background Intellectual Property"** means all Intellectual Property introduced and required by either Party to give effect to their obligations under this Agreement owned in whole or in part by or licensed to either Party or their affiliates prior to the Commencement Date or developed after the Commencement Date otherwise pursuant to the Agreement;
- 2.4. **"Business Day(s)"** means Mondays to Fridays between 07:30 and 16:00, excluding public holidays;
- 2.5. **"Commencement Date"** means the effective date at which time the Supplier's provision of Services to Transnet in terms of the Agreement shall commence, as detailed in Schedule 1 hereto (SCHEDULE OF REQUIREMENTS / WORK ORDER);
- 2.6. **"Confidential Information"** means any information or other data, whether in written, oral, graphic or in any other form such as in documents, papers, memoranda, correspondence, notebooks, reports, drawings, diagrams, discs, articles, samples, test results, prototypes, designs, plans, formulae, patents, or inventor's certificates, which a Party discloses or provides to the other Party (intentionally or unintentionally, or as a result of one Party permitting the representative of the other Party to visit any of its premises), or which otherwise becomes

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known to a Party, and which is not in the public domain and includes, without limiting the generality of the term –

- 2.6.1. information relating to methods of operation, data and plans of the disclosing Party;
- 2.6.2. the contents of the Agreement;
- 2.6.3. private and personal details of employees or clients of the disclosing Party or any other person where an onus rests on the disclosing Party to maintain the confidentiality of such information;
- 2.6.4. any information disclosed by either Party and which is clearly marked as being confidential or secret;
- 2.6.5. information relating to the strategic objectives and planning of the disclosing Party relating to its existing and planned future business activities;
- 2.6.6. information relating to the past, present and future research and development of the disclosing Party;
- 2.6.7. information relating to the business activities, business relationships, products, services, customers, clients and subcontractors of the disclosing Party where an onus rests on the disclosing Party to maintain the confidentiality of such information;
- 2.6.8. information contained in the software and associated material and documentation belonging to the disclosing Party;
- 2.6.9. technical and scientific information, Know-How and trade secrets of a disclosing Party including inventions, applications and processes;
- 2.6.10. Copyright works;
- 2.6.11. commercial, financial and marketing information;
- 2.6.12. data concerning architecture, demonstrations, tools and techniques, processes, machinery and equipment of the disclosing Party;
- 2.6.13. plans, designs, concepts, drawings, functional and technical requirements and specifications of the disclosing Party;
- 2.6.14. information concerning faults or defects in goods, equipment, hardware or software or the incidence of such faults or defects; and
- 2.6.15. information concerning the charges, Fees and / or costs of the disclosing Party or its authorised subcontractors, or their methods, practices or service performance levels actually achieved;

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- 2.7. **“Copyright”** means the right in expressions, procedures, methods of operations or mathematical concepts, computer program codes, compilations of data or other material, literary works, musical works, artistic works, sound recordings, broadcasts, program carrying signals, published editions, photographic works, or cinematographic works of the copyright owner to do or to authorise the doing of certain acts specified in respect of the different categories of works;
- 2.8. **“Default”** means any breach of the obligations of either Party (including but not limited to fundamental breach or breach of a fundamental term) or any Default, act, omission, negligence or statement of either Party, its employees, agents or subcontractors in connection with or in relation to the subject of the Agreement and in respect of which such Party is liable to the other;
- 2.9. **“Deliverable(s)”** means any and all works of authorship, products and materials developed, written, prepared, assembled, integrated, modified or provided by the Supplier in relation to the Services;
- 2.10. **“Designs”** means registered designs and/or design applications and will include the monopoly right granted for the protection of an independently created industrial design including designs dictated essentially by technical or functional considerations as well as topographies of integrated circuits and integrated circuits;
- 2.11. **“Fee(s)”** shall mean the agreed Fees for the Services to be purchased from the Supplier by Transnet, as detailed in the Schedule of Requirements or Work Order(s), issued in accordance with the Agreement, as amended by mutual agreement between the Parties and in accordance with the provisions of the Agreement from time to time;
- 2.12. **“Foreground Intellectual Property”** means all Intellectual Property developed by either Party pursuant to the Agreement;
- 2.13. **“Intellectual Property”** means Patents, Designs, Know-How, Copyright and Trade Marks and all rights having equivalent or similar effect which may exist anywhere in the world and includes all future additions and improvements to the Intellectual Property;
- 2.14. **“Know-How”** means all Confidential Information of whatever nature relating to the Intellectual Property and its exploitation as well as all other Confidential Information generally relating to Transnet's field of technology, including technical information, processing or manufacturing techniques, Designs, specifications, formulae, systems, processes, information concerning materials and marketing and business information in general;
- 2.15. **“Materials”** means the Deliverables, the Supplier Materials and the Third Party Materials;
- 2.16. **“Parties”** means the Parties to the Agreement together with their subsidiaries, divisions, business units, successors-in-title and their assigns;

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- 2.17. **“Party”** means either one of these Parties;
- 2.18. **“Patents”** means registered patents and patent applications, once the latter have proceeded to grant, and includes a right granted for any inventions, products or processes in all fields of technology;
- 2.19. **“Permitted Purpose”** means any activity or process to be undertaken or supervised by Personnel or employees of one Party during the term of the Agreement, for which purpose authorised disclosure of the other Party’s Confidential Information or Intellectual Property is a prerequisite in order to enable such activity or process to be accomplished;
- 2.20. **“Personnel”** means any partner, employee, agent, consultant, independent associate or supplier, subcontractor and the staff of such subcontractor, or other authorised representative of either Party;
- 2.21. **“Purchase Order(s)”** means official orders issued by an operating division of Transnet to the Supplier for the provision of Services;
- 2.22. **“Schedule of Requirements”** means Schedule 1 hereto, unless substituted by a Work Order or Work Orders, as defined;
- 2.23. **“Service(s)”** means Service(s) provided to Transnet by the Supplier, pursuant to the Schedule of Requirements or Work Order(s) in terms of the Agreement;
- 2.24. **“Service Level Agreement”** or **“SLA”** means the processes, deliverables, key performance indicators and performance standards relating to the Services to be provided by the Supplier;
- 2.25. **“Subcontract”** means any contract or agreement or proposed contract or agreement between the Supplier and any third party whereby that third party agrees to provide to the Supplier the Services or any part thereof;
- 2.26. **“Supplier Materials”** means all works of authorship, products and materials (including, but not limited to, data, diagrams, charts, reports, specifications, studies, inventions, software, software development tools, methodologies, ideas, methods, processes, concepts and techniques) owned by, or licensed to, the Supplier prior to the Commencement Date or independently developed by the Supplier outside the scope of the Agreement at no expense to Transnet, and used by the Supplier in the performance of the Services;
- 2.27. **“Third Party Material”** means software, software development tools, methodologies, ideas, methods, processes, concepts and techniques owned by, or licensed to a third party and used by the Supplier in the performance of the Services;

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- 2.28. **“Trade Marks”** means registered trade marks and trade mark applications and includes any sign or logo, or combination of signs and/or logos capable of distinguishing the goods or services of one undertaking from those of another undertaking;
- 2.29. **“VAT”** means Value-Added Tax in terms of the Value-Added Tax Act, No 89 of 1991: and
- 2.30. **“Work Order(s)”** means a detailed scope of work for a Service required by Transnet, including timeframes, deliverable, Fees and costs for the supply of the Service to Transnet, which may be appended to the Agreement from time to time.

3. INTERPRETATION

- 3.1. Clause headings in the Agreement are included for ease of reference only and do not form part of the Agreement for the purposes of interpretation or for any other purpose. No provision shall be construed against or interpreted to the disadvantage of any Party hereto by reason of such Party having or being deemed to have structured or drafted such provision.
- 3.2. Any term, word, acronym or phrase used in the Agreement, other than those defined under the clause heading “DEFINITIONS,” shall be given its plain English meaning, and those terms, words, acronyms, and phrases used in the Agreement will be interpreted in accordance with the generally accepted meanings accorded thereto.
- 3.3. A reference to the singular incorporates a reference to the plural and vice versa.
- 3.4. A reference to natural persons incorporates a reference to legal persons and vice versa.
- 3.5. A reference to a particular gender incorporates a reference to the other genders.

4. NATURE AND SCOPE

- 4.1. The Agreement is an agreement under the terms and conditions of which the Supplier will arrange for the provision to Transnet of the Services, which meet the requirements of Transnet, the delivery of which Services is controlled by means of Purchase Orders to be issued by Transnet and executed by the Supplier, in accordance with the Agreement.
- 4.2. Such Purchase Orders shall be agreed between the Parties from time to time, subject to the terms of the Schedule of Requirements and / or relevant Work Order(s).
- 4.3. Each properly executed Purchase Order forms an inseparable part of the Agreement as if it were fully incorporated into the body of the Agreement.
- 4.4. During the period of the Agreement, both Parties can make written suggestions for amendments to the Schedule of Requirements or Work Orders, in accordance with procedures set out in clause 28 (AMENDMENT AND CHANGE CONTROL) below. A Party will advise the other

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Party within 14 (fourteen) Business Days, or such other period as mutually agreed, whether the amendment is acceptable.

- 4.5. Insofar as any term, provision or condition in the Schedule of Requirements and/or Work Order(s) conflicts with a like term, provision or condition in the Agreement and/or a Purchase Order, or where the Agreement is silent on the matter, the term, provision or condition in the Schedule of Requirements and/or Work Order(s) shall prevail.
- 4.6. Time will be of the essence and the Supplier will perform its obligations under the Agreement in accordance with the timeframe(s) (if any) set out in the relevant schedule, save that the Supplier will not be liable under this clause if it is unable to meet such obligation within the time required as a direct result of any act or omission by Transnet and it has used its best endeavours to advise Transnet of such act or omission. In the event of such delay, any time deadlines detailed in the relevant schedule shall be extended by a period equal to the period of that delay.

5. AUTHORITY OF PARTIES

- 5.1. Nothing in the Agreement will constitute or be deemed to constitute a partnership between the Parties, or constitute or be deemed to constitute the Parties as agents or employees of one another for any purpose or in any form whatsoever.
- 5.2. Neither Party shall be entitled to, or have the power or authority to enter into an agreement in the name of the other; or give any warranty, representation or undertaking on the other's behalf; or create any liability against the other or bind the other's credit in any way or for any purpose whatsoever.

6. WARRANTIES

- 6.1. The Supplier warrants to Transnet that -
- 6.1.1. it has full capacity and authority to enter into and to perform the Agreement and that the Agreement is executed by duly authorised representatives of the Supplier;
- 6.1.2. it will discharge its obligations under the Agreement and any annexure or schedule hereto with all due skill, care and diligence;
- 6.1.3. it will be solely responsible for the payment of remuneration of its Personnel. The Supplier will be solely responsible for the payment of remuneration and associated benefits, if any, and for withholding and remitting income tax for its Personnel in conformance with any applicable laws and regulations;
- 6.1.4. it will procure licences for Transnet in respect of all Third Party Material detailed in the Work Order(s), and will procure the right for Transnet to take such copies (in

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whole or in part) of such Third Party Materials as it may reasonably require for the purposes of back-up for archiving and disaster recovery; and

- 6.1.5. the use or possession by Transnet of any Materials will not subject Transnet to any claim for infringement of any Intellectual Property Rights of any third party.
- 6.2. The Supplier warrants that it will perform its obligations under the Agreement in accordance with the Service Levels as defined in the relevant schedule. Transnet may at its discretion audit compliance with the Service Levels, provided that any such audit is carried out with reasonable prior notice and in a reasonable way so as not to have an adverse effect on the performance of the Services. Without prejudice to sub-clause 6.3 below, in the event that the Supplier fails to meet the Service Levels, Transnet may claim appropriate service credits or invoke a retention of Fees as detailed in the relevant schedule and/or Work Order.
- 6.3. The Supplier warrants that for a period of 90 (ninety) days from Acceptance of the Deliverables they will, if properly used, conform in all material respects with the requirements set out in the relevant schedule. The Supplier will at its expense remedy any such non-conformance as soon as possible but in any event within 30 (thirty) days of notification by Transnet. In the event that the Supplier fails or is unable to remedy such non-conformance within such time-scale, Transnet will be entitled to employ a third party to do so in place of the Supplier and any excess charges or costs incurred by Transnet as a result shall be paid by the Supplier.
- 6.4. The Supplier will remedy any defect within 14 (fourteen) days of being notified of that defect by Transnet in writing.
- 6.5. The Supplier will not be liable to remedy any problem arising from or caused by any modification made by Transnet to the Deliverables, or any part thereof, without the prior approval of the Supplier.
- 6.6. The Supplier shall advise Transnet of the effects of any steps proposed by Transnet pursuant to sub-clause 6.5 above, including but not limited to any cost implications or any disruption or delay in the performance of the Services. The Parties agree that any changes to the Services, including the charges for the Services or any timetables for delivery of the Services, will be agreed in accordance with the change control procedure, as set out in clause 28 (AMENDMENT AND CHANGE CONTROL).
- 6.7. The Supplier warrants that -
- 6.7.1. it has, using the most up-to-date software available, tested for (and deleted) all commonly known viruses in the Materials and for all viruses known by the Supplier at the date of the relevant Work Order; and

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6.7.2. at the time of delivery to Transnet, the Materials do not contain any trojan horse, worm, logic bomb, time bomb, back door, trap door, keys or other harmful components.

The Supplier agrees that, in the event that a virus is found, it will at its own expense use its best endeavours to assist Transnet in reducing the effect of the virus and, particularly in the event that a virus causes loss of operational efficiency or loss of data, to assist Transnet to the same extent to mitigate such losses and to restore Transnet to its original operating efficiency.

6.8. The Supplier undertakes to comply with South Africa's general privacy protection in terms of the Bill of Rights (Section 14) in connection with the Agreement and shall procure that its Personnel shall observe the provisions of such Act (as applicable) or any amendments and re-enactments thereof and any regulations made pursuant thereto.

6.9. The Supplier warrants that it has taken all reasonable precautions to ensure that, in the event of a disaster, the impact of such disaster on the ability of the Supplier to comply with its obligations under the Agreement will be reduced to the greatest extent possible, and that the Supplier shall ensure that it has appropriate, tested and documented recovery arrangements in place.

7. TRANSNET'S OBLIGATIONS

7.1. Transnet undertakes to promptly comply with any reasonable request by the Supplier for information, including information concerning Transnet's operations and activities, that relate to the Services as may be necessary for the Supplier to perform the Services, but for no other purpose. However, Transnet's compliance with any request for information is subject to any internal security rules and requirements and subject to the observance by the Supplier of its confidentiality obligations under the Agreement.

7.2. The Supplier shall give Transnet reasonable notice of any information it requires in accordance with sub-clause 7.1 above.

7.3. Subject to 13 (SUPPLIER'S PERSONNEL), Transnet agrees to provide the Supplier or its Personnel such access to and use of its facilities as is necessary to allow the Supplier to perform its obligations under the Agreement.

8. GENERAL OBLIGATIONS OF THE SUPPLIER

8.1. The Supplier shall –

8.1.1. respond promptly to all complaints and enquiries from Transnet;

8.1.2. inform Transnet immediately of any dispute or complaint arising in relation to the provision of the Services.

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- 8.1.3. conduct its business in a professional manner that will reflect positively upon the Supplier and the Supplier's Services;
 - 8.1.4. keep full records clearly indicating all transactions concluded by the Supplier relating to the performance of the Services and keep such records for at least 5 (five) years from the date of each such transaction;
 - 8.1.5. obtain, and at all times maintain in full force and effect, any and all licenses, permits and the like required under applicable laws for the provision of the Services and the conduct of the business and activities of the Supplier; and
 - 8.1.6. comply with all applicable environmental legislation and regulations, and demonstrate sound environmental policies, management and performance.
- 8.2. The Supplier acknowledges and agrees that it shall at all times -
- 8.2.1. render the Services and perform all its duties with honesty and integrity;
 - 8.2.2. communicate openly and honestly with Transnet and demonstrate a commitment to performing the Services timeously, efficiently and to the required standards;
 - 8.2.3. endeavour to provide the highest possible standards of service and professionalism, with a reasonable degree of care and diligence;
 - 8.2.4. use its best endeavours and make every diligent effort to meet agreed deadlines;
 - 8.2.5. treat its own Personnel, as well as all Transnet's officers, employees, agents and consultants, with fairness and courtesy and respect for their human rights;
 - 8.2.6. practice and promote its own internal policies aimed at prohibiting and preventing unfair discrimination (as further referred to in clause 22 – EQUALITY AND DIVERSITY);
 - 8.2.7. treat all enquiries from Transnet in connection with the Services with courtesy and respond to all enquiries promptly and efficiently. Where the Supplier is unable to comply with the provisions of this clause, the Supplier will advise Transnet of the delay and the reasons therefore and will keep Transnet informed of progress made regarding the enquiry;
 - 8.2.8. when requested by Transnet, provide clear and accurate information regarding the Supplier's own policies and procedures, excluding Know-How and other Confidential Information, except where a Non-Disclosure Agreement has been entered into between the Parties;

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- 8.2.9. not allow a conflict of interest to develop between its own interests (or the interests of any of its other customers) and the interests of Transnet;
- 8.2.10. not accept or offer, nor allow, induce or promote the acceptance or offering of any gratuity, enticement, incentive or gift that could reasonably be regarded as bribery or an attempt to otherwise exert undue influence over the recipient;
- 8.2.11. not mislead Transnet or its officers, employees and stakeholders, whether by act or omission;
- 8.2.12. not otherwise act in an unethical manner or do anything which could reasonably be expected to damage or tarnish Transnet's reputation or business image; and
- 8.2.13. immediately report to Transnet any unethical, fraudulent or otherwise unlawful conduct of which it becomes aware in connection with Transnet or the provision of Services.

9. FEES AND EXPENSES

- 9.1. In consideration of the provision of the Services, Transnet will pay to the Supplier the Fees detailed in the relevant schedule or Work Order.
- 9.2. Transnet will not be invoiced for materials used in the provision of the Services save for those materials (if any) set out in the Work Order and accepted by Transnet or in any relevant Work Order (which will be invoiced to Transnet at cost).
- 9.3. Unless otherwise agreed in a schedule or Work Order, Transnet will reimburse to the Supplier all reasonable and proper expenses incurred directly and solely in connection with the provision of the Services, provided that all such expenses -
 - 9.3.1. are agreed by Transnet in advance;
 - 9.3.2. are incurred in accordance with Transnet's standard travel and expenses policies;
 - 9.3.3. are passed on to Transnet at cost with no administration fee; and
 - 9.3.4. will only be reimbursed if supported by relevant receipts.
- 9.4. All invoices relating to Fees, out of pocket expenses and, if applicable, travel and accommodation costs, will provide the detail for each of the Personnel carrying out the Services and incurring the expenses, and the invoice will, where appropriate, include VAT as a separate item.

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10. INVOICING AND PAYMENT

- 10.1. Transnet shall pay the Supplier the amounts stipulated in the relevant schedule or Work Order, subject to the terms and conditions of the Agreement.
- 10.2. Transnet shall pay such amounts to the Supplier, upon receipt of a correct and undisputed invoice together with the supporting documentation as specified in the Schedule of Requirements or Work Order appended hereto, once the undisputed invoices, or such portion of invoices which are undisputed become due and payable to the Supplier for the provision of the Services, in terms of sub-clause 10.4 below.
- 10.3. All Fees and other sums payable under the Agreement are exclusive of VAT, which will be payable at the applicable rate.
- 10.4. Unless otherwise provided for in the Schedule of Requirements or Work Order(s) appended to the Agreement, invoices shall be submitted together with a month-end statement. Payment against such month-end statement shall be made by Transnet within 30 (thirty) days after date of receipt by Transnet of the statement together with all undisputed invoices and supporting documentation.
- 10.5. Where the payment of any invoice, or any part of an invoice which is not in dispute, is not made in accordance with this clause 10, the Supplier shall be entitled to charge interest on the outstanding amount, at The Standard Bank of South Africa's prime rate of interest in force, for the period from the due date of payment until the outstanding amount is paid.

11. FEE ADJUSTMENTS

- 11.1. Fees for Services rendered in terms of the Agreement shall be subject to review as indicated in the Schedule of Requirements or Work Orders annexed hereto from time to time.
- 11.2. No less than 2 (two) months prior to any proposed Fee adjustment, the Parties shall commence negotiations for Fees for the next period or as otherwise indicated and appended hereto.
- 11.3. Should Transnet and the Supplier fail to reach an agreement on Fees for the successive period, either Party shall be entitled to terminate the Agreement and/or the relevant Work Order after giving 30 (thirty) days written notice to the other.
- 11.4. Neither Party shall have any claim against the other of whatsoever nature by reason of such cancellation as envisaged in sub-clause 11.3 above.

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12. INTELLECTUAL PROPERTY RIGHTS

12.1. Title to Confidential Information

- 12.1.1. Transnet will retain all right, title and interest in and to its Confidential Information and Background Intellectual Property and the Supplier acknowledges that it has no claim of any nature in and to the Confidential Information and Background Intellectual Property that is proprietary to Transnet. For the avoidance of doubt, all the Supplier's Background Intellectual Property shall remain vested in the Supplier.
- 12.1.2. Transnet shall grant to the Supplier an irrevocable royalty free non-exclusive license to use Transnet's Background Intellectual Property only for the Permitted Purpose. This license shall not permit the Supplier to sub-license to other parties.
- 12.1.3. The Supplier shall grant to Transnet an irrevocable, royalty free, non-exclusive licence to use the Supplier's Background Intellectual Property for the Permitted Purpose. This licence shall not permit Transnet to sub-license to other parties.
- 12.1.4. The Supplier shall grant Transnet access to the Supplier's Background Intellectual Property on terms which shall be bona fide negotiated between the Parties for the purpose of commercially exploiting the Foreground Intellectual Property, to the extent that such access is required.

12.2. Title to Intellectual Property

- 12.2.1. All right, title and interest in and to Foreground Intellectual Property prepared conceived or developed by the Supplier, its researchers, agents and employees shall vest in Transnet and the Supplier acknowledges that it has no claim of any nature in and to the Foreground Intellectual Property. The Supplier shall not at any time during or after the termination or cancellation of the Agreement dispute the validity or enforceability of such Foreground Intellectual Property, or cause to be done any act or thing contesting or in any way impairing or tending to impair any part of that right, title and interest to any of the Foreground Intellectual Property and shall not counsel or assist any person to do so.
- 12.2.2. Transnet shall be entitled to seek protection in respect of the Foreground Intellectual Property anywhere in the world as it shall decide in its own absolute discretion and the Supplier shall reasonably assist Transnet in attaining and maintaining protection of the Foreground Intellectual Property.
- 12.2.3. Where the Foreground Intellectual Property was created by the Supplier or its researchers, agents and employees and where Transnet elects not to exercise its

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option to seek protection or decides to discontinue the financial support of the prosecution or maintenance of any such protection, Transnet shall notify the Supplier who shall have the right of first refusal to file or continue prosecution or maintain any such applications and to maintain any protection issuing on the Foreground Intellectual Property.

- 12.2.4. No consideration shall be paid by Transnet to the Supplier for the assignment of any Foreground Intellectual Property from the Supplier to Transnet, over and above the sums payable in terms of this Agreement. The Supplier undertakes to sign all documents and do all things as may be necessary to effect, record and perfect the assignment of the Foreground Intellectual Property to Transnet.
- 12.2.5. Subject to anything contrary contained in the Agreement and/or the prior written consent of Transnet (which consent shall not be unreasonably withheld), the Supplier shall under no circumstances be entitled as of right, or to claim the right, to use Transnet's Background Intellectual Property and/or Foreground intellectual Property.

12.3. Title to Improvements

- 12.3.1. Any improvements, developments, adaptations and/or modifications to the Foreground Intellectual Property, and any and all new inventions or discoveries, based on or resulting from the use of Transnet's Background Intellectual Property and/or Confidential Information shall be exclusively owned by Transnet. The Supplier shall disclose promptly to Transnet all such improvements, developments, adaptations and/or modifications, inventions or discoveries. The Supplier hereby undertakes to sign all documents and do all things as may be necessary to effect, record and perfect the assignment of such improvements, developments, adaptations and/or modifications, inventions or discoveries to Transnet and the Supplier shall reasonably assist Transnet in attaining, maintaining or documenting ownership and/or protection of the improved Foreground Intellectual Property.

12.4. Unauthorised Use of Confidential Information

- 12.4.1. The Supplier shall not authorise any party to act on or use in any way any Confidential Information belonging to Transnet whether or not such supplier is aware of such Confidential Information, and shall promptly notify Transnet of the information if it becomes aware of any party so acting, and shall provide Transnet the information with such assistance as Transnet reasonably requires, at Transnet's cost and expense, to prevent such third party from so acting.

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12.5. Unauthorised Use of Intellectual Property

- 12.5.1. The Supplier agrees to notify Transnet in writing of any conflicting uses of, and applications of registrations of Patents, Designs and Trade Marks or any act of infringement, unfair competition or passing off involving the Intellectual Property of Transnet of which the Supplier acquires knowledge and Transnet shall have the right, as its own option, to proceed against any party infringing its Intellectual Property.
- 12.5.2. It shall be within the discretion of Transnet to determine what steps shall be taken against the infringer and the Supplier shall co-operate fully with Transnet, at Transnet's cost, in whatever measure including legal action to bring any infringement of illegal use to an end.
- 12.5.3. The Supplier shall cooperate to provide Transnet promptly with all relevant ascertainable facts.
- 12.5.4. If proceedings are commenced by Transnet alone, Transnet shall be responsible for all expenses but shall be entitled to all damages or other award arising out of such proceedings. If proceedings are commenced by both Parties, both Parties will be responsible for the expenses and both Parties shall be entitled to damages or other award arising out of proceedings.

13. SUPPLIER'S PERSONNEL

- 13.1. The Supplier's Personnel shall be regarded at all times as employees, agents or subcontractors of the Supplier and no relationship of employer and employee shall arise between Transnet and any Supplier Personnel under any circumstances regardless of the degree of supervision that may be exercised over the Personnel by Transnet.
- 13.2. The Supplier warrants that all its Personnel will be entitled to work in South Africa or any other country in which the Services are to be performed.
- 13.3. The Supplier will ensure that its Personnel comply with all reasonable requirements made known to the Supplier by Transnet concerning conduct at any Transnet premises or any other premises upon which the Services are to be performed (including but not limited to security regulations, policy standards and codes of practice and health and safety requirements). The Supplier will ensure that such Personnel at all times act in a lawful and proper manner in accordance with these requirements.
- 13.4. Transnet reserves the right to refuse to admit or to remove from any premises occupied by or on behalf of it, any Supplier Personnel whose admission or presence would, in the reasonable opinion of Transnet, be undesirable or who represents a threat to confidentiality or security or

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whose presence would be in breach of any rules and regulations governing Transnet's Personnel, provided that Transnet notifies the Supplier of any such refusal (with reasons why). The reasonable exclusion of any such individual from such premises shall not relieve the Supplier from the performance of its obligations under the Agreement.

- 13.5. The Supplier agrees to use all reasonable endeavours to ensure the continuity of its Personnel assigned to perform the Services. If any re-assignment by the Supplier of those Personnel is necessary, or if Transnet advises that any such Personnel assigned are in any respect unsatisfactory, including where any such Personnel are, or are expected to be or have been absent for any period, then the Supplier will promptly supply a replacement of equivalent calibre and experience, and any such replacement shall be approved by Transnet prior to commencing provision of the Services, such approval not to be unreasonably withheld.

14. LIMITATION OF LIABILITY

- 14.1. Neither Party excludes or limits liability to the other Party for -

14.1.1. death or personal injury due to negligence; or

14.1.2. fraud.

- 14.2. The Supplier shall indemnify and keep Transnet indemnified from and against liability for damage to any Transnet property (whether tangible or intangible) or any other loss, costs or damage suffered by Transnet to the extent that it results from any act of or omission by the Supplier or its Personnel in connection with the Agreement. The Supplier's liability arising out of this sub-clause 14.2 shall be limited to a maximum amount payable in respect of any one occurrence or a series of related occurrences in a single calendar year, such amount to be agreed in writing by the Parties.

- 14.3. Subject always to sub-clauses 14.1 and 14.2, the liability of either the Supplier or Transnet under or in connection with the Agreement, whether for negligence, misrepresentation, breach of contract or otherwise, for direct loss or damage arising out of each Default or series of related Defaults shall not exceed 100% (one hundred percent) of the Fees paid under the schedule or Work Order to which the Default(s) relates.

- 14.4. Subject to sub-clause 14.1 above, and except as provided in sub-clauses 14.2 and 14.3 above, in no event shall either Party be liable to the other for indirect or consequential loss or damage or including indirect or consequential loss of profits, business, revenue, goodwill or anticipated savings of an indirect nature or loss or damage incurred by the other Party as a result of third party claims.

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- 14.5. If for any reason the exclusion of liability in sub-clause 14.4 above is void or unenforceable, either Party's total liability for all loss or damage under the Agreement shall be as provided in sub-clause 14.3 above.
- 14.6. Nothing in this clause 14 shall be taken as limiting the liability of the Supplier in respect of clause 12 (INTELLECTUAL PROPERTY RIGHTS) or clause 16 (CONFIDENTIALITY).

15. INSURANCES

- 15.1. Without limiting the liability of the Supplier under the Agreement, the Supplier shall take out insurance in respect of all risks for which it is prudent for the Supplier to insure against including any liability it may have as a result of its activities under the Agreement for theft, destruction, death or injury to any person and damage to property. The level of insurance will be kept under review by Transnet, on an annual basis, to ensure its adequacy, provided that any variation to the level of such insurance shall be entirely at the discretion of the Supplier.
- 15.2. The Supplier shall arrange insurance with reputable insurers and will produce to Transnet evidence of the existence of the policies and the receipts for payment of the current premiums, on an annual basis within thirty (30) days after date of policy renewals.
- 15.3. Subject to sub-clause 15.4 below, if the Supplier fails to effect adequate insurance under this clause 15, it shall notify Transnet in writing as soon as it becomes aware of the reduction or inadequate cover and Transnet may arrange or purchase such insurance. The Supplier shall promptly reimburse Transnet for any premiums paid provided such insurance protects the Supplier's liability. Transnet assumes no responsibility for such insurance being adequate to protect all of the Supplier's liability.
- 15.4. In the event that the Supplier receives written notice from its insurers advising of the termination of its insurance cover referred to in sub-clause 15.1 above or if the insurance ceases to be available upon commercially reasonable terms, the Supplier shall immediately notify Transnet in writing of such termination and/or unavailability whereafter either the Supplier or Transnet may terminate the Agreement on giving the other party not less than 30 (thirty) days prior written notice to that effect

16. CONFIDENTIALITY

- 16.1. The Parties hereby undertake the following, with regard to Confidential Information -
- 16.1.1. not to divulge or disclose to any person whomsoever in any form or manner whatsoever, either directly or indirectly, any Confidential Information of the other, without the prior written consent of such other Party, other than when called upon to do so in accordance with a statute, or by a court having jurisdiction, or by any other duly authorised and empowered authority or official, in which event the Party

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concerned shall do what is reasonably possible to inform the other of such a demand and each shall assist the other in seeking appropriate relief or the instituting of a defensive action to protect the Confidential Information concerned;

- 16.1.2. not to use, exploit, permit the use of, directly or indirectly, or in any other manner whatsoever apply the Confidential Information, disclosed to it as a result of the Agreement, for any purpose whatsoever other than for the purpose for which it is disclosed or otherwise than in strict compliance with the provisions in the Agreement;
- 16.1.3. not to make any notes, sketches, drawings, photographs or copies of any kind of any part of the disclosed Confidential Information, without the prior written consent of such other Party, except when reasonably necessary for the purpose of this Agreement, in which case such copies shall be regarded as Confidential Information;
- 16.1.4. not to de-compile, disassemble or reverse engineer any composition, compilation, concept application, item, component de-compilation, including software or hardware disclosed and shall not analyse any sample provided by Transnet, or otherwise determine the composition or structure or cause to permit these tasks to be carried out except in the performance of its obligations pursuant to this Agreement;
- 16.1.5. not to exercise less care to safeguard Transnet Confidential Information than the Party exercises in safeguarding its own competitive, sensitive or Confidential Information;
- 16.1.6. Confidential Information disclosed by either Party to the other or by either Party to any other party used by such Party in the performance of the Agreement, shall be dealt with as "restricted" or shall be dealt with according to any other appropriate level of confidentiality relevant to the nature of the information concerned, agreed between the Parties concerned and stipulated in writing for such information in such cases;
- 16.1.7. the Parties shall not make or permit to be made by any other person subject to their control, any public statements or issue press releases or disclose Confidential Information with regard to any matter related to the Agreement, unless written authorisation to do so has first been obtained from the Party first disclosing such information;

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- 16.1.8. each Party shall be entitled to disclose such aspects of Confidential Information as may be relevant to one or more technically qualified employees or consultants of the Party who are required in the course of their duties to receive the Confidential Information for the Permitted Purpose provided that the employee or consultant concerned has a legitimate interest therein, and then only to the extent necessary for the Permitted Purpose, and is informed by the Party of the confidential nature of the Confidential Information and the obligations of the confidentiality to which such disclosure is subject and the Party shall ensure such employees or consultants honour such obligations;
- 16.1.9. each Party shall notify the other Party of the name of each person or entity to whom any Confidential Information has been disclosed as soon as practicable after such disclosure;
- 16.1.10. each Party shall ensure that any person or entity to which it discloses Confidential Information shall observe and perform all of the covenants the Party has accepted in the Agreement as if such person or entity has signed the Agreement. The Party disclosing the Confidential Information shall be responsible for any breach of the provisions of the Agreement by the person or entity; and
- 16.1.11. each Party may by written notice to the other Party specify which of the Party's employees, officers or agents are required to sign a non-disclosure undertaking.
- 16.2. The duties and obligations with regard to Confidential Information in this clause 16 shall not apply where -
- 16.2.1. a Party can demonstrate that such information is already in the public domain or becomes available to the public through no breach of the Agreement by that Party, or its Personnel; or
- 16.2.2. was rightfully in a Party's possession prior to receipt from the other Party, as proven by the first-mentioned Party's written records, without an infringement of an obligation or duty of confidentiality; or
- 16.2.3. can be proved to have been rightfully received by a Party from a third party without a breach of a duty or obligation of confidentiality; or
- 16.2.4. is independently developed by a Party as proven by its written records.
- 16.3. This clause 16 shall survive termination for any reason of the Agreement and shall remain in force and effect from the Commencement Date of the Agreement and 5 (five) years after the termination of the Agreement. Upon termination of the Agreement, all documentation furnished to the Supplier by Transnet pursuant to the Agreement shall be returned to Transnet including,

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without limitation all corporate identity equipment including dies, blocks, labels, advertising matter, printing matter and the like.

17. TOTAL OR PARTIAL FAILURE TO PERFORM THE SCOPE OF SERVICES

Should the Supplier fail or neglect to execute the work or to deliver any portion of the Service, as required by the terms of the Agreement or Work Order, Transnet may cancel the Agreement or Work Order in so far as it relates to the unexecuted work or rejected portion of the Service, and, in such event, the provision of any remaining commitment shall remain subject in all respects to these conditions.

18. TERM AND TERMINATION

- 18.1. The Agreement shall commence on the Commencement Date, as specified in the schedules hereto, and shall continue subject to termination in accordance with the provisions of the Agreement or otherwise in accordance with law or equity.
- 18.2. Transnet may terminate the Agreement without cause by giving the Supplier 30 (thirty) days' notice in writing.
- 18.3. Either Party may terminate the Agreement forthwith by notice in writing to the other Party where the other Party has committed a material Default and, where such Default is capable of remedy, has failed to remedy such Default within 30 (thirty) days of receiving notice specifying the Default and requiring its remedy.
- 18.4. Either Party may terminate the Agreement forthwith by notice in writing to the other Party when the other Party is unable to pay its debts as they fall due or commits any act or omission which would be an act of insolvency in terms of the Insolvency Act, 1936 (as amended), or if any action, application or proceeding is made with regard to it for -
- 18.4.1. a voluntary arrangement or composition or reconstruction of its debts;
 - 18.4.2. the presentation of an administrative petition;
 - 18.4.3. its winding-up or dissolution;
 - 18.4.4. the appointment of a liquidator, trustee, receiver, administrative receiver or similar officer; or
 - 18.4.5. any similar action, application or proceeding in any jurisdiction to which it is subject.
- 18.5. Transnet may terminate the Agreement at any time within 2 (two) months of becoming aware of a change of control of the Supplier by notice in writing to the Supplier. For the purposes of this clause, "control" means the right to direct the affairs of a company whether by ownership of shares, membership of the board of directors, agreement or otherwise.

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18.6. Transnet may cancel any schedule hereto or Work Order at any time on giving the Supplier 30 (thirty) days' notice.

19. CONSEQUENCE OF TERMINATION

19.1. Termination in accordance with clause 18 (TERM AND TERMINATION) shall not prejudice or affect any right of action or remedy which shall have accrued or shall thereafter accrue to either Party and all provisions which are to survive the Agreement or impliedly do so shall remain in force and in effect.

19.2. On termination of the Agreement or a Work Order, the Supplier will immediately deliver up, and procure that its Personnel will immediately deliver up to Transnet, all Deliverables and property belonging to Transnet (or, in the event of termination of a Work Order, such as is relevant to that Work Order) which may be in the possession of, or under the control of the Supplier, and certify to Transnet in writing that this has been done.

19.3. To the extent that any of the Deliverables and property referred to in sub-clause 19.2 above are in electronic form and contained on non-detachable storage devices, the Supplier will provide Transnet with unencrypted copies of the same on magnetic media and will irretrievably destroy and delete copies so held.

19.4. In the event that the Agreement is terminated by the Supplier under sub-clause 18.3 (TERM AND TERMINATION), or in the event that a Work Order is terminated by Transnet under sub-clause 18.6 (TERM AND TERMINATION), Transnet will pay to the Supplier all outstanding Fees (apportioned on a daily basis) relating to the work undertaken by the Supplier up until the date of such termination. Transnet will also pay the costs of any goods and materials ordered by the Supplier in relation to the such work for which the Supplier has paid or is legally obliged to pay, in which case, on delivery of such goods or materials, the Supplier will promptly deliver such goods and materials to Transnet or as it may direct.

19.5. The provisions of clauses 2 (DEFINITIONS), 6 (WARRANTIES), 12 (INTELLECTUAL PROPERTY RIGHTS), 14 (LIABILITY), 16 (CONFIDENTIALITY), 19 (CONSEQUENCE OF TERMINATION), 25 (DISPUTE RESOLUTION) and 29 (GOVERNING LAW) shall survive termination or expiry of the Agreement.

19.6. If either Party (the "Defaulting Party") commits a material breach of the Agreement and fails to remedy such breach within 10 (ten) Business Days of written notice thereof, the other Party (hereinafter the "Aggrieved Party"), shall be entitled, in addition to any other rights and remedies that it may have in terms of the Agreement, to terminate the Agreement forthwith without any liability and without prejudice to any claims which the Aggrieved Party may have for damages against the Defaulting Party. For the avoidance of doubt, if -

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- 19.6.1. the Supplier effects or attempts to effect a compromise or composition with its creditors; or
- 19.6.2. either Party is provisionally or finally liquidated or is placed under judicial management, whether provisionally or finally; or
- 19.6.3. either Party ceases or threatens to cease to carry on its normal line of business or defaults or threatens to default in the payment of its liabilities generally, or commits any act or omission which would be an act of insolvency in terms of the Insolvency Act, 1936 (as amended); then

the other Party shall be entitled, but not obliged, to terminate the Agreement on written notice, in which event such termination shall be without any liability and without prejudice to any claims which either Party may have for damages against the other.

20. ASSIGNMENT

Neither Party may assign the benefit of the Agreement or any interest hereunder except with the prior written consent of the other. Further, in the event that Transnet wishes to assign or novate the Agreement to any third party, the Supplier agrees that it shall not unreasonably withhold or delay its consent to such assignment or novation and that it shall only be entitled to recover from Transnet any reasonable legal costs incurred by it as a direct result of such assignment or novation.

21. FORCE MAJEURE

21.1. Neither Party shall have any claim against the other Party arising from any failure or delay in the performance of any obligation of either Party under the Agreement, caused by an act of force majeure such as acts of God, fire, flood, war, strike, lockout, industrial dispute, government action, laws or regulations, riots, terrorism or civil disturbance, defaults, delays or discontinuance on the part of independent contractors, suppliers, or other circumstances or factors beyond the reasonable control of either Party, and to the extent that the performance of obligations of either Party hereunder is delayed by virtue of the foregoing, any period stipulated for any such performance shall be reasonably extended.

21.2. Each Party will take all reasonable steps by whatever lawful means that are available, to resume full performance as soon as practicable and will seek agreement to modification of the relevant provisions of the Agreement in order to accommodate the new circumstances caused by the act of force majeure. If a Party fails to agree to such modifications proposed by the other Party within 90 (ninety) days of the act of force majeure first occurring, either Party may thereafter terminate the Agreement with immediate notice.

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22. EQUALITY AND DIVERSITY

- 22.1. The Supplier will not victimise, harass or discriminate against any employee of either Party to the Agreement or any applicant for employment with either Party to the Agreement due to their gender, race, disability, age, religious belief, sexual orientation or part-time status. This provision applies, but is not limited to employment, upgrading, work environment, demotion, transfer, recruitment, recruitment advertising, termination of employment, rates of pay or other forms of compensation and selection for training.
- 22.2. Both Parties to the Agreement undertake that they will not, and shall procure that its employees, agents and subcontractors will not breach any applicable discrimination legislation and any amendments and re-enactments thereof.

23. NON-WAIVER

- 23.1. Failure or neglect by either Party, at any time, to enforce any of the provisions of the Agreement, shall not, in any manner, be construed to be a waiver of any of that Party's rights in that regard and in terms of the Agreement.
- 23.2. Such failure or neglect shall not, in any manner, affect the continued, unaltered validity of the Agreement, or prejudice the right of that Party to institute subsequent action.

24. PARTIAL INVALIDITY

If any provision of the Agreement shall be held to be invalid, illegal or unenforceable, or shall be required to be modified, the validity, legality and enforceability of the remaining provisions shall not be affected thereby.

25. DISPUTE RESOLUTION

- 25.1. Should any dispute of whatsoever nature arise between the Parties concerning the Agreement, the Parties shall try to resolve the dispute by negotiation within 10 (ten) Business Days of such dispute arising.
- 25.2. If the dispute has not been resolved by such negotiation, either of the Parties may refer the dispute to AFSA and notify the other Party accordingly.
- 25.3. Such dispute shall be finally resolved in accordance with the rules of AFSA by an arbitrator or arbitrators appointed by AFSA.
- 25.4. This clause constitutes an irrevocable consent by the Parties to any proceedings in terms hereof, and neither of the Parties shall be entitled to withdraw from the provisions of this clause or claim at any such proceedings that it is not bound by this clause 25.

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25.5. This clause 25 is severable from the rest of the Agreement and shall remain in effect even if the Agreement is terminated for any reason.

25.6. This clause 25 shall not preclude either Party from seeking urgent relief in a court of appropriate jurisdiction, where grounds for urgency exist.

26. ADDRESSES FOR NOTICES

26.1. The Parties to the Agreement select the physical addresses and facsimile (“fax”) numbers, detailed in Schedule 2 hereto, as their respective addresses for giving or sending any notice provided for or required in terms of the Agreement, provided that either Party shall be entitled to substitute such other address or fax number, as may be, by written notice to the other.

26.2. Any notice addressed to a Party at its physical or postal address shall be sent by prepaid registered post, or delivered by hand, or sent by fax.

26.3. Any notice shall be deemed to have been given -

26.3.1. if posted by prepaid registered post, 10 (ten) days after the date of posting thereof;

26.3.2. if hand delivered, on the day of delivery; or

26.3.3. if faxed, on the date and time of sending of such fax, as evidenced by a fax confirmation printout, provided that such notice shall be confirmed by prepaid registered post on the date of dispatch of such fax, or, should no postal facilities be available on that date, on the next Business Day.

27. WHOLE AND ONLY AGREEMENT

27.1. The Parties hereby confirm that the Agreement constitutes the whole and only agreement between them with regard to the subject matter of the Agreement.

27.2. The Parties hereby confirm that the Agreement replaces all other agreements which exist or may have existed in any form whatever between them, with regard to the subject matter dealt with in the Agreement, including any annexures, schedules or Work Order(s) appended hereto.

28. AMENDMENT AND CHANGE CONTROL

28.1. Any requirement for an amendment or change to the Agreement or to the Schedule of Requirements or to a Work Order shall only be valid if it is in writing, signed by both Parties and added to the Agreement as an addendum hereto.

28.2. In the event the Parties cannot agree upon changes, the Parties shall in good faith seek to agree any proposed changes using the dispute resolution procedures in clause 25 (DISPUTE RESOLUTION).

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29. GOVERNING LAW

The Agreement is exclusively governed by and construed in accordance with the laws of the Republic of South Africa and is subject to the jurisdiction of the courts of the Republic of South Africa.

30. COUNTERPARTS

The Agreement may be signed in any number of counterparts, all of which taken together shall constitute one and the same instrument. Either Party may enter into the Agreement by signing any such counterpart.

“PREVIEW COPY ONLY”

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GENERAL TENDER CONDITIONS - SERVICES

FORM CSS5

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1. GENERAL

All tenders and subsequent contracts and orders shall be subject to the following procedures as laid down by Transnet Limited (hereinafter referred to as “Transnet”) and are to be strictly adhered to by any person or enterprise or company responding to this tender (hereinafter referred to as “Respondents” or the “Respondent”).

2. LODGING OF TENDER

2.1 Tenders shall be lodged with Transnet no later than the closing date and time specified for the receipt thereof, in accordance with the directions issued with tender documents.

2.2 Tenders shall be transmitted in a sealed envelope and placed in the Tender Box at a venue stipulated in the Request for Tender (RFT) or Request for Proposal (RFP) or Request for Quotation (RFQ) (collectively “Tender Documents”), with the tender number and subject endorsed on the left hand bottom corner of the envelope.

3. USE OF TENDER FORMS

Where special forms are issued by Transnet for the submission of tenders, Respondents are required to submit their tenders by completion of the appropriate sections on such official forms and not on office stationery bearing their own special conditions of tender; non-compliance with this conditions may result in the rejection of a tender.

4. THE RAISING OF A CHARGE FOR PLANS, SPECIFICATIONS AND TENDER FORMS

4.1 A non-refundable charge may be raised for Tender Documents, depending on the nature, magnitude and value of technical information supplied.

4.2 If any of the drawings and specifications referred to in Tender Documents are the official publications of recognised standardising bodies, copies of such drawings and specifications shall be acquired by Respondents at their own expense.

5. DEFAULTS BY RESPONDENTS

5.1 If the Respondent, after it has been notified of the acceptance of its tender/quotation fails to:

- (a) enter into a formal contract when called upon to do so in terms of clause 13 (*Contract Documents*), within such period as Transnet may specify; or
- (b) accept an order in terms of the tender or quotation; or
- (c) when called upon to do so, furnish satisfactory security of the fulfilment of the contract in terms of clause 14 (*Securities*);

Transnet may, in any such case, without prejudice to any other legal remedy which it may have, proceed to accept any other tender or quotation or, if it is necessary to do so, call for

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tenders or quotations afresh, and may recover from the defaulting Respondent any additional expense incurred by it in calling for new offers or in accepting a higher offer.

5.2 If any Respondent, who has submitted a tender or quotation, concluded a contract with Transnet (hereinafter referred to as "the Supplier"), or in the capacity of agent or subcontractor has been associated with such tender or contract -

- (a) has withdrawn such tender/quotation after the advertised date and hour for the receipt of tenders; or
- (b) has, after having been notified of the acceptance of its tender or quotation, failed or refused to sign a contract when called upon to do so in terms of any condition forming part of the tender documents; or
- (c) has carried out any contract resulting from such tender or quotation in an unsatisfactory manner or has breached any condition of such contract; or
- (d) has offered, promised or given a bribe in relation to the obtaining or the execution of such contract; or
- (e) has acted in a fraudulent or improper manner or in bad faith towards Transnet or any government department or towards any public body, company or person; or
- (f) has made any incorrect statement in the affidavit or certificate referred to in clause 11 (*Formal Notification Regarding Name of Successful Respondent*) and is unable to prove to the satisfaction of Transnet that
 - (i) it made the statement in good faith honestly believing it to be correct; and
 - (ii) before making such statement, it took all reasonable steps to satisfy itself of its correctness; or
- (g) caused Transnet damage, or to incur costs in order to meet the Supplier's requirements which could not be recovered from the Supplier;

then a tender from any such Respondent shall be disqualified and the person, enterprise or company (including any directors) shall, subject to clause 5.3 below, be disqualified from tendering for any Transnet business.

5.3 Any person or enterprise or company against whom a decision has been given under the provisions of sub-clauses 5.2(b), 5.2(d) or 5.2(e) above, may make representations to the Chief Operating Officer of Transnet Group, whose decision shall be final.

5.4 Any disqualification imposed upon any person or enterprise or company, unless Transnet determines otherwise, shall apply to any other enterprise under the same or different names of disqualified persons or enterprise or company (or associates thereof) and shall for avoidance of doubt also be applied to any agent or employee of the person or enterprise or company concerned.

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6. CURRENCY

Prices or fees must be quoted in the currency of the Republic of South Africa in respect of local Services. Prices or fees in any other currency may be rejected by Transnet save where such price is quoted by a foreign Respondent.

7. EXCHANGE AND REMITTANCE

The Respondent should note that where the whole or a portion of the contract or order value is to be remitted overseas, Transnet shall, if requested to do so by the Supplier, effect payment overseas directly to the foreign principal or service provider of such percentage of the contract or order value as may be stipulated by the Respondent in its Tender Documents and any variation in the amount to be so paid, which may arise as a result of fluctuations in the rate of exchange involved, will be for the account of the Supplier.

7.1 The Respondent who desires to avail itself of the aforementioned facility must at the time of tendering furnish the information called for in the clause "Exchange and Remittance" of the Tender Documents and also furnish full details of the principals or service providers to whom payment is to be made.

7.2 The Supplier shall at its own cost obtain forward exchange cover on foreign currency to protect itself against any currency rate fluctuation risks for the duration of any resulting contract or order. Transnet will NOT accept any fluctuations in the rate of exchange at the time when payments are made.

Transnet will not recognise any claim for adjustment of the order and/or contract price under clause 7.2 above, if the increase in price arises after the date on which the Services were to be delivered, as set out in the order and/or contract, or any subsequent agreement between the parties.

8. ACCEPTANCE OF TENDER OR QUOTATION

8.1 Transnet does not bind itself to accept the lowest or any tender or quotation nor will it give any reasons for the rejection of a tender or quotation. Transnet reserves the right to accept any tender in whole or in part.

8.2 Upon the acceptance of a tender or quotation by Transnet, the parties shall be bound by these General Tender Conditions and the Standard Terms and Conditions of Contract (Form US7 - Services).

8.3 Where the acceptance by Transnet of the Respondent's offer/bid is delivered by letter, the South African Post Office shall be regarded as the agent of Transnet and delivery of such notice of acceptance to the South African Post Office shall be considered as delivery to the Respondent.

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8.4 Where the Respondent has been informed by Transnet per facsimile message of the acceptance of its tender or quotation, the acknowledgement of receipt transmitted by its facsimile machine shall be regarded as proof of delivery to the Respondent.

9. LAW GOVERNING CONTRACT

The law of the Republic of South Africa shall govern the contract created by the acceptance of a tender/quotation. The *domicilium citandi et executandi* shall be a place in the Republic of South Africa to be specified by the Respondent in its tender/quotation at which all legal documents may be served on the Respondent who shall agree to submit to the jurisdiction of the courts of the Republic of South Africa. A foreign Respondent shall, therefore, state in its tender/quotation the name of its accredited agent in the Republic of South Africa who is empowered to sign any contract which may be entered into in the event of its tender/quotation being accepted and to act on its behalf in all matters relating to the contract.

10. IDENTIFICATION

If the Respondent is a company, the full names of the directors shall be stated in the tender/quotation. If the Respondent is a close corporation, the full names of the members shall be stated in the tender/quotation. If the Respondent is a partnership or an individual trading under a trade name, the full names of the partners or of such individual, as the case may be, shall be furnished.

11. FORMAL NOTIFICATION REGARDING NAME OF SUCCESSFUL RESPONDENT

In the case of tenders submitted to the Secretary of a Divisional Acquisition Council, unsuccessful Respondents will be formally notified of the names of successful Respondent(s) as soon as possible after the closing date for receipt of the tender in question. In the case of tenders or quotations submitted to Transnet Acquisition Council, unsuccessful Respondents shall, upon application, be furnished with similar information.

12. UNAUTHORISED COMMUNICATION ABOUT TENDERS

Where tenders are submitted to the Secretary of an Acquisition Council, Respondents may at any time communicate with the Secretary on any matter relating to its tender but, in the absence of written authority from the Secretary, no communication on a question affecting the subject of a tender shall take place between Respondents or other potential suppliers or any member of the Acquisition Council or official of Transnet during the period between the closing date for the receipt of the tender and the date of the notification of the successful Respondent(s). A tender, in respect of which any such unauthorised communication has occurred, may be disqualified.

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13. CONTRACT DOCUMENTS

The contract documents will comprise these General Tender Conditions and the Standard Terms and Conditions of Contract (Form US7 - Services) which will constitute the contract between the parties upon receipt by the Respondent of Transnet's letter of acceptance / intent, subject to all additional amendments and/or special conditions thereto as agreed to by the parties.

14. SECURITIES

- 14.1 The successful Respondent, when called upon to do so, shall provide security to the satisfaction of Transnet for the due fulfilment of a contract or order. Such security shall be in the form of a deed of suretyship furnished by an approved bank, building society, insurance or guarantee corporation carrying on business in South Africa.
- 14.2 The security may be applied in whole or part at the discretion of Transnet to make good any loss or damage which Transnet may incur in consequence of a breach of the contract or any part thereof.
- 14.3 Such security, if required, shall be an amount which will be stipulated in the Tender Documents.
- 14.4 For the purpose of clause 14.1 above, Transnet will supply "Deed of Suretyship" forms to the successful Respondent for completion and no guarantee in any other form will be accepted. Copies of such forms will be supplied to Respondents on request. For this purpose "Deed of Suretyship" forms will be provided which shall be completed and returned to Transnet or a designated official by the successful Respondent within 30 (thirty) days from the date of the letter of acceptance. No payment will be made until the forms, duly completed, are delivered to Transnet. Failure to return the Deed of Suretyship within the prescribed time shall, save where prior extension has been granted, entitle Transnet without notice to the Supplier to cancel the contract with immediate effect.
- 14.5 Additional costs incurred by Transnet necessitated by reason of default on the part of the Supplier in relation to the conditions of this clause 14 will be for the account of the Supplier.

15. PRICES SUBJECT TO CONFIRMATION

- 15.1 A tender or quotation with prices which are subject to confirmation will not be considered.
- 15.2 Tenders where firm prices are quoted for the duration of any resulting order and/or contract will receive precedence over prices which are subject to adjustment.

16. DELETION OF SERVICES EXCLUDED FROM OFFER/BID

The Respondent must delete Services for which it has not tendered or for which the price or fee has been included elsewhere in the tender.

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17. ALTERATIONS MADE BY THE RESPONDENT TO TENDERED PRICES

All alterations made by the Respondent to its tendered price(s) prior to the submission of its Tender Documents must be done by deleting the incorrect figures and words where required and by inserting the correct figures and words against the items/Services concerned. All such alterations must be initialled by the person who signs the Tender Documents. Failure to observe this requirement may result in the particular item(s) or Services concerned being excluded in the matter of the award of the business.

18. VALUE-ADDED TAX

18.1 In respect of local Services, i.e. Services to be provided by a South African company, the prices or fees quoted by the Respondent are to be exclusive of Value-Added Tax (VAT) which must be shown separately at the standard rate on the Supplier's Tax Invoice.

18.2 In respect of Services to be provided by a foreign principal -

- (a) The invoicing by a local Supplier on behalf of its foreign principal represents a Service rendered by the principal, which is not subject to VAT;
- (b) The Supplier's Tax Invoice(s) for the local portion only (i.e. the "commission" for the Services rendered locally) must show the Value-Added Tax (VAT) separately at zero percent if the Services are in compliance with Section 11(2) of the VAT Act, 89 of 1991.

19. TERMS AND CONDITIONS OF TENDER

The Supplier shall adhere to the Standard Terms and Conditions of Contract as set out in Form US7 - Services), a copy of which is attached hereto. Should the Respondent find any conditions unacceptable, it should indicate which conditions are unacceptable and offer an alternative. Please note that any alternative offered shall be compared with acceptance of the Form US7 conditions or alternatives offered by other Respondents.

20. IMPORTANT NOTICE TO RESPONDENTS REGARDING PAYMENT

20.1 Method of Payment

- (a) The attention of the Respondent is directed to clause 10 (*Invoicing and Payment*) of Form US7 – Services, which sets out the conditions of payment on which tender price(s) shall be based.
- (b) However, in addition to the foregoing the Respondent is invited to submit offers based on alternative methods of payment and/or financing proposals.
- (c) The Respondent is required to give full particulars of the terms that will be applicable to its alternative offer(s) and the financial merits thereof will be evaluated and taken into consideration when the tender is adjudicated.

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- (d) The Respondent must, therefore, in the first instance, tender strictly in accordance with sub-clause 20.1(a) above. Failure to comply with sub-clause 20.1(a) above may preclude a tender from further consideration.

NOTE: The successful Respondent (the Supplier) shall, where applicable, be required to furnish a guarantee covering any advance payments.

20.2 Conditional Discount

Respondents offering prices which are subject to a conditional discount applicable for payment within a specific period are to note that the conditional period will be calculated as from the date of receipt by Transnet of the Supplier's month-end statement reflecting the relevant Tax Invoice(s) for payment purposes, provided the conditions of the order or contract have been fulfilled and the Tax Invoice is correct in all respects as referred to in the contract or order. Incomplete and/or incorrect Tax Invoices shall be returned and the conditional period will be recalculated from the date of receipt of the correct documents.

21. PLANS, DRAWINGS, DIAGRAMS, SPECIFICATIONS AND DOCUMENTS

Copyright in plans, drawings, diagrams, specifications and documents compiled by the Supplier for the purpose of contract work shall be governed by the terms and conditions detailed in clause 12 of Form US7 - Services (*Intellectual Property Rights*).

22. VISITS TO FOREIGN COUNTRIES

22.1 Respondents must furnish details in a covering letter if it is considered necessary that employees of Transnet should carry out inspection and/or review any operational Services at the premises of the successful Respondent (the Supplier) or its subcontractors overseas for the purpose of a product demonstration and/or final acceptance or for any other reason.

22.2 If the Respondent considers overseas visits to be necessary it must provide the following information in a covering letter in respect of each visit -

- (a) countries and places to be visited;
- (b) number of employees and disciplines involved;
- (c) number of man-days involved; and
- (d) motivation for the visit.

22.3 Transnet will make all arrangements with regard to booking of air journeys, hotel reservations, transport to and from airports, places of inspection or demonstration, etc. and all expenses will be for the account of Transnet.

22.4 Before a visit is undertaken, such as envisaged in this clause 22, Transnet and the Supplier will agree in writing on the number of employees of Transnet that should undertake the visit and the number of man-days involved in the visit.

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23. TENDERS BY FOREIGN RESPONDENTS OR ON THEIR BEHALF

- 23.1 Tenders submitted by foreign principals may be forwarded direct by the principals to the Secretary of the Acquisition Council or to a designated official of Transnet according to whichever officer is specified in the Tender Documents, or may be so forwarded on the principal's behalf by its South African representative and/or agent provided that written proof is submitted that such representative / agent has been duly authorised to act in that capacity by the principal. Failure to submit such authorisation by the representative / agent shall disqualify the tender.
- 23.2 When legally authorised to prepare and submit tenders on behalf of their principals not domiciled in the Republic of South Africa, representatives and/or agents must compile the tenders in the names of such principals and sign them on behalf of the latter.
- 23.3 South African representatives and/or agents of successful foreign Respondents must when so required enter into a formal contract in the name of their principals and must sign such contracts on behalf of the latter. In every such case a legal Power of Attorney from their principals must be furnished to Transnet by the South African representative and/or agents authorising them to enter into and sign such contracts.
- (a) Such Powers of Attorney must comply with Government Notice No. 1160 of 27 June 1930 (and any amendments thereto) - "Rules of the Supreme Court of South Africa for the authentication of documents executed outside the Republic for use within the Republic."
 - (b) The Powers of Attorney must be signed by principals under the same title as used in the Tender Documents.
 - (c) On arrival within the Republic of South Africa these Powers of Attorney are to be completed in terms of Section 8(2) of the Stamp Duties Act No. 77 of 1968, or any amendment thereof.
 - (d) If a Power of Attorney held by the South African representative or agent includes matters of a general nature besides provision for the entering into and signing of contracts with Transnet, a notially certified copy thereof should be furnished.
 - (e) The Power of Attorney must authorise the South African representative or agent to choose the *domicilium citandi et executandi* as provided for in clause 26 (*Addresses for Notices*) of the Standard Conditions of Contract, Form US7 - Services.
- 23.4 If payment is to be made in South Africa, the foreign Supplier (i.e. the principal, or its South African agents or representatives), must notify Transnet in writing whether -
- (a) For payment by cheque –

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- (i) cheques are to be drawn for payment to the credit of the foreign Supplier's account at a bank in South Africa, in which case the name and branch of such bank shall be furnished; or
 - (ii) cheques are to be made out in favour of the foreign Supplier and forwarded to its South African agent or representative, in which case such agent or representative must be duly authorised to sign the receipt of the cheque and discharge it on behalf of its principal.
- (b) For payment by electronic funds transfer (EFT) –
- (i) funds are to be transferred to the credit of the foreign Supplier's account at a bank in South Africa, in which case the name and branch of such bank shall be furnished; or
 - (ii) funds are to be transferred to the credit of its South African agent or representative, in which case the name and branch of such bank shall be furnished

23.5 The attention of the Respondent is directed to clause 14 above (*Securities*) regarding the provision of security for the fulfilment of contracts and orders and the manner and form in which such security is to be furnished.

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Price list

Description	Estimated Annual Quantity	Price per unit	Total price
ALUMINOTHERMIC WELD CRUCIBLE, ONE SHOT	13574		
ALUMINOTHERMIC WELD ECOFILTER, ONE SHOT	22		
ALUMINOTHERMIC WELD KIT, F, GR700, 30/40KG	44		
ALUMINOTHERMIC WELD KIT, F, GR700, 40KG	33		
ALUMINOTHERMIC WELD KIT, L, GR700, 40KG	6		
ALUMINOTHERMIC WELD KIT, W, GR700, 40KG	6		
ALUMINOTHERMIC WELD KIT, F, GR700, 40/48KG	55		
ALUMINOTHERMIC WELD KIT, F, GR900, 48KG	2750		
ALUMINOTHERMIC WELD KIT, M, GR900, 48KG	110		
ALUMINOTHERMIC WELD KIT, M, GR900, 48KG, 4-6MM	165		
ALUMINOTHERMIC WELD KIT, F, GR900, 48/51KG	275		
ALUMINOTHERMIC WELD KIT, L, GR900, 48KG	440		
ALUMINOTHERMIC WELD KIT, W, GR900, 48KG	440		
ALUMINOTHERMIC WELD KIT, F, GR900, 48KG, 4-6MM	550		
ALUMINOTHERMIC WELD KIT, F, GR900, 48KG, SLAB	17		
ALUMINOTHERMIC WELD KIT, F, GR900, 48/57KG	330		
ALUMINOTHERMIC WELD KIT, F, GR1100, 48KG	55		
ALUMINOTHERMIC WELD KIT, L, GR1100, 48KG	28		
ALUMINOTHERMIC WELD KIT, W, GR1100, 48KG	28		
ALUMINOTHERMIC WELD KIT, F, GR1100, 48KG, 4-6MM	110		
ALUMINOTHERMIC WELD KIT, F, GR1100, 48KG, SLAB	17		
ALUMINOTHERMIC WELD KIT, F, GR350LHT, 48KG	330		
ALUMINOTHERMIC WELD KIT, M, GR350LHT, 48KG	55		
ALUMINOTHERMIC WELD KIT, L, GR350LHT, 48KG	55		
ALUMINOTHERMIC WELD KIT, W, GR350LHT, 48KG	55		
ALUMINOTHERMIC WELD KIT, F, GR350LHT, 48KG, 4-6MM	110		
ALUMINOTHERMIC WELD KIT, F, GR1100, 57KG/S60	17		
ALUMINOTHERMIC WELD KIT, F, GR350LHT, 48KG, SLAB	17		
ALUMINOTHERMIC WELD KIT, F, GR350LHT, 48/51KG	110		
ALUMINOTHERMIC WELD KIT, F, GR350LHT, 48/57KG	110		
ALUMINOTHERMIC WELD KIT, F, GR900, 57KG	1100		
ALUMINOTHERMIC WELD KIT, M, GR900, 57KG	220		

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ALUMINOTHERMIC WELD KIT, L, GR900, 57KG	330		
ALUMINOTHERMIC WELD KIT, W, GR900, 57KG	330		
ALUMINOTHERMIC WELD KIT, F, GR900, 57KG, 4-6MM	330		
ALUMINOTHERMIC WELD KIT, F, GR900, 57KG, SLAB	17		
ALUMINOTHERMIC WELD KIT, F, GR900, 57KG/S60	220		
ALUMINOTHERMIC WELD KIT, F, GR900, 57KG/60E1	28		
ALUMINOTHERMIC WELD KIT, F, GR1100, 57KG	110		
ALUMINOTHERMIC WELD KIT, M, GR1100, 57KG	6		
ALUMINOTHERMIC WELD KIT, L, GR1100, 57KG	6		
ALUMINOTHERMIC WELD KIT, W, GR1100, 57KG	6		
ALUMINOTHERMIC WELD KIT, F, GR1100, 57KG, 4-6MM	33		
ALUMINOTHERMIC WELD KIT, F, GR1100, 57KG, SLAB	17		
ALUMINOTHERMIC WELD KIT, F, GR1100, 57KG/60E1	17		
ALUMINOTHERMIC WELD KIT, F, GR350LHT, 57KG	1100		
ALUMINOTHERMIC WELD KIT, M, GR350LHT, 57KG	110		
ALUMINOTHERMIC WELD KIT, L, GR350LHT, 57KG	55		
ALUMINOTHERMIC WELD KIT, W, GR350LHT, 57KG	55		
ALUMINOTHERMIC WELD KIT, F, GR350LHT, 57KG, 4-6MM	110		
ALUMINOTHERMIC WELD KIT, F, GR350LHT, 57KG, SLAB	17		
ALUMINOTHERMIC WELD KIT, F, GR350LHT, 57KG/60E1	66		
ALUMINOTHERMIC WELD KIT, M, GR1100, UIC60	440		
ALUMINOTHERMIC WELD KIT, L, GR1100, UIC60	17		
ALUMINOTHERMIC WELD KIT, W, GR1100, UIC60	17		
ALUMINOTHERMIC WELD KIT, M, GR1100, UIC60, 4-6MM	297		
ALUMINOTHERMIC WELD KIT, M, GR1100, S60	220		
ALUMINOTHERMIC WELD KIT, L, GR1100, S60	28		
THERMITE WELD KIT, W, GR1100, S60	28		
ALUMINOTHERMIC WELD KIT, M, GR1100, S60, 4-6MM	440		
ALUMINOTHERMIC WELD KIT, M, G1100, S60/60E1	165		
ALUMINOTHERMIC WELD KIT, M, GR350LHT, 60E1	1100		
ALUMINOTHERMIC WELD KIT, L, GR350LHT, 60E1	110		
ALUMINOTHERMIC WELD KIT, W, GR350LHT, 60E1	110		
ALUMINOTHERMIC WELD KIT, F, GR900, 64KG	6		
ALUMINOTHERMIC WELD KIT, F, GR900, 88KG	6		
COMPOUND, POST HEAT, CRMN, 60KG	440		
MOULD SHOES, 40/48KG, F	2		
MOULD SHOES, 40KG, F	6		
MOULD SHOES, 48/57KG, F	17		

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MOULD SHOES, 48KG, F	33		
MOULD SHOES, 48KG, F, SLAB TRACK	1		
MOULD SHOES, 48KG, L	17		
MOULD SHOES, 48KG, W	11		
MOULD SHOES, 48KG, M	11		
MOULD SHOES, 57/60KG, F	2		
MOULD SHOES, 57KG OR 60KG, F	11		
MOULD SHOES, 57KG, F	22		
MOULD SHOES, 57KG, F, SLAB TRACK	2		
MOULD SHOES, 57KG, L	11		
MOULD SHOES, 57KG, W	6		
MOULD SHOES, 57KG, M	39		
MOULD SHOES, 64KG, F, CRANE/RAIL	1		
MOULD SHOES, 88KG, F, CRANE RAIL	1		

Note:

ALUMINOTHERMIC WELD KID

1. Portion
2. Ignitor
3. Moulds
4. Sealing sand/paste
5. Pouring plug

GAP SIZES

F = 24mm - 26mm
M = 35mm - 40mm
L = 40mm - 50mm
W = 65mm - 71mm

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**TRANSNET LIMITED
(REGISTRATION NO. 90/00900/06)
TRADING AS TRANSNET FREIGHT RAIL**

Project Specification

For

**THE SUPPLY OF ALUMINO-THERMIC RAIL WELDING
CONSUMABLES**

SECTION A:

THE SUPPLY OF ALUMINO-THERMIC RAIL WELDING CONSUMABLES

A1.0 SCOPE

- A1.1 This specification defines the product requirements of joining Vignole rails using the Alumino-thermic welding process for Transnet Freight Rail railway lines.
- A1.2 This specification is to be used for all consumable items such as Alumino-thermic powder, crucibles, moulds etc. used for the Alumino-thermic welding of rails on Transnet Freight Rail railway lines.

The specification is divided into four (4) sections:-

- Section A: This section is applicable to all exothermic welding consumables
- Section B: This section is applicable for Alumino-thermic welding kits for railway welding
- Section C: This section is applicable for the long life refractory crucible for rail welding
- Section D: This section is applicable for Alumino-thermic welding kits using the "SINGLE SHOT" crucible method for rail welding

All the test methods and parameters relevant to each section are to be found in Appendix A of this specification.

A2.0 INTRODUCTION

- A2.1 This Specification shall be a binding agreement between the Manufacturer/Supplier and Transnet Freight Rail.
- A2.2 Any compliments to this Specification shall be conveyed to the Manufacturer in writing and the relevant clause/s affected by the amendment shall be completely rewritten, in order to provide an adequate safeguard against possible misinterpretation thereof. No verbal amendments shall be accepted.
- A2.3 All reference in this Specification to the Engineer shall be taken to mean:- The Chief Engineer (Infrastructure, Engineering) of Transnet Freight Rail or a person lawfully acting on his behalf.

A2.4 All reference in this Specification to the Inspector shall be taken to mean:- A person appointed by Transnet Freight Rail to inspect goods and processes.

A3.0 GENERAL CONDITIONS

- (a) The Alumino-thermic welding products and consumables shall be compatible with the following rail profiles normally used on Transnet Freight Rail railway lines:-
- UIC 60/60E1
 - S60
 - SAR 57
 - SAR 48
 - SAR 40
 - SAR 30
 - Rail steel chemistries and metallurgies of Head Hardened, UIC grade 1100 (Chrome Manganese), UIC grade 900A and UIC grade 700.
- (b) Gap sizes of "Small = 24 - 26 mm", "Medium = 35 - 40 mm" and "Large = 40 - 50 mm" are to be catered for.
- (c) All products and processes offered by the Manufacturer in his tender shall be pre-tested by Transnet Freight Rail to ensure compliance with Transnet Freight Rail requirements and this Specification.
The tests shall comprise radiographic tests, static bending tests, fatigue bending tests, rolling load tests, chemical analysis of weld metal, and hardness and metallurgical tests amongst others, as detailed in Appendix A of this Specification.

A4.0 QUALITY CONTROL

A4.1 General

A4.1.1 The Engineer or the Inspector will periodically inspect deliveries to ensure strict adherence to this Specification. Any items, which do not conform to the specification, shall be rejected. No payment will be made for any rejected items.

A4.1.2 All instrumentation and tests, described in Appendix A, required for Quality Control shall be at the Manufacturer's expense.

A4.1.3 Manufacturers shall state their quality assurance control measures that are employed during the manufacturing process of the Alumino-thermic welding

materials offered, as well as inspections and testing procedures.

A4.1.4 Transnet Freight Rail reserves the right to have access to all documentation and testing equipment pertaining to the quality assurance of all Alumino-thermic welding materials on prior arrangement.

A4.1.5 The Manufacturer shall keep relevant proof documents of the tests performed on each batch, and must be able to submit copies to Transnet Freight Rail whenever requested. These documents must be available to Transnet Freight Rail for a minimum period of five years after the date of manufacturing.

A5.0 TECHNICAL REQUIREMENTS AND TESTING

A5.1 Rails

A5.1.1 The dimensions of the above-mentioned rails shall be as shown on Manual for Track Maintenance (2000), Annexure 14, Sheets 1 – 4 and shall be within the normal rolling and straightness tolerances laid down in the S116 Specification for new railway rails.

A5.1.2 The rails required to be welded shall be either new, worn or combinations of new to worn. The rails may contain existing fish-bolt holes and the products and processes shall accommodate such holes. The Manufacturer shall advise with his tender, for approval by Transnet Freight Rail, the maximum difference in rail height that can be accommodated in normal practice with his products and processes. In addition the welding of rails with crown side wear of up to 26 mm shall be satisfactorily accommodated by minor modifications to the Alumino-thermic welding processes.

A5.1.3 The Manufacturer shall design all equipment, processes and products to ensure safety of the welding operators and railway track, prevent movement of or disruption to the joint set-up and accommodate the temperature and environmental factors experienced by Transnet Freight Rail.

A5.1.4 All products and processes shall be suitable for and compatible with all aspects of Alumino-thermic welding work found on Transnet Freight Rail railway lines. Typical although not exhaustive requirements are rail inclinations of 1:20 relative to the sleeper, track super-elevations of up to 100 mm on track gauge of 1065 mm, gradients of up to 1:30 and track radii as sharp as 90 metres or combinations of such instances.

A5.1.5 The crucibles shall be designed and manufactured to avoid splashing of liquid steel and be safe to use.

As a special, a crucible design for containment or elimination of noxious gases when welding in confined areas such as tunnels shall be supplied with the tender.

A5.1.6 The welding process shall be designed and the kits and products manufactured to produce a complete and satisfactory Alumino-thermic weld by one Transnet Freight Rail trained welder and two assistants in a minimum of 45 minutes total track occupation.

A5.1.7 The Manufacturer shall supply full details with his tender of all ancillary equipment needed for the safe and correct performance of an Alumino-thermic weld using the materials and processes for which he is tendering. The kits shall be as complete as possible for automatically ensuring the satisfactory completion of one Alumino-thermic weld and avoid as far as possible the need for ancillary equipment.

A5.1.8 All processes and products shall be compatible with and suitable for the satisfactory and safe welding of the above-mentioned rail profiles with the following rail steel chemistries.-

- (a) UIC grade 1100 (Chrome Manganese)
- (b) UIC grade 900 A
- (c) UIC grade 700
- (d) UIC grade 350 LHT

A5.1.9 The Manufacturer shall specify in his tender the recommended preheating and post heating processes, and equipment for use with his product and processes. The post heating requirements of UIC grade 1100 rail shall be specifically required in the Manufacturer's products, designs and processes.

A5.1.10 Specific details of the risering system and process as pertains to the removal of the risers and the application of post heating requirements shall be submitted by the Manufacturer with his tender.

A5.1.11 The welds produced using the Manufacturers products and processes shall not contain any porosity larger than 0.2 mm. Should any porosity be present, its form shall be rounded and uniformly distributed throughout the rail steel. Chains of porosity and sharp forms shall be unacceptable. The tenderer shall advise with his tender the maximum size, concentration and disposition of porosity expected with the use of his products.

A5.1.12 The Manufacturer's products and processes shall not create any adverse or deleterious effects in welded track and on the environment.

A6.0 PERFORMANCE REQUIREMENTS

A6.1 Hardness of Welds

The Manufacturer shall submit with his Tender the following details for approval by Transnet Freight Rail. Details of the hardness of the welds in "As Cast" condition without any work hardening.

- (a) The minimum hardness (Vickers) expected in the spheroidised zones of a typical weld of the type tendered for: Measurement to be made on, a smooth ground surface in "as cast" condition.
- (b) Explicit details of expected hardness profiles of the spheroidised zones of the weld. Such hardness profiles shall be produced using a Vickers hardness testing machine and shall consist of readings taken longitudinally along the centre line of the running surface of the rail crown at 2 mm intervals. The hardness profiles shall be for "as cast" condition subject to the normal and required post heating for the requisite rail steel type.
- (c) The maximum and minimum hardness in the spheroidised zone.
- (d) The maximum width of spheroidised zones as seen when etched with Ammonium persulphate solution.

The following goals should be aimed for by the Manufacturer:-

- Maximum width of visible spheroidised zone when revealed by surface etching to be 6 mm.
- Minimum hardness in the spheroidised zones to be 280 Hardness Vickers for Head Hardened rail welds, 270 Hardness Vickers for UIC grade 1100 rail welds, and 220 Hardness Vickers for UIC grade 900A rail welds at 2mm below the running surface.
- No martensite at all shall be permitted in the Alumino-thermic weld.

A6.2 Mechanical and Fatigue Properties

- (a) The minimum breaking loads and deflections for static bend tests performed as per Appendix A.
- (b) The Alumino-thermic welding products and processes for UIC 60 profile, UIC grade 1100 rail welds shall produce a welded rail joint having the following fatigue capabilities: -

- The Alumino-thermic weld shall achieve a minimum fatigue life of 10 million cycles without failure when loaded cyclically to 160 MPa tension in the foot followed by 13 MPa tension in the crown when loaded in a cyclical manner at approximately 6 cycles per second.

A7.0 PACKAGING AND MARKING

- A7.1 *Packaging.* The Manufacturer's disposable, single use crucibles shall be packaged in the same cardboard container with the appropriate, matched and metallurgically compatible, Alumino-thermic welding portion for use with that specific crucible type.
- A7.2 *Marking.* The packaging shall indicate in a clear legible and non-coded language, on two of the exterior sides of the cardboard container, the following:-
- The process requirements applicable to the contents
 - The top of the box
 - The mass of the contents
 - The maximum number of containers that may be stacked one upon the other without damage to the contents.

A clear, specific instruction regarding the mould and crucible requirements for the Alumino-thermic portion contained in the cardboard container.

- A7.3 All packaging shall be colour coded, robust, double walled cardboard boxes in accordance with Transnet Freight Rail's TRACK WELDING MANUAL (LATEST EDITION) and special packaging requirements as per each attached specification shall be complied with.

A8.0 TRAINING DOCUMENTATION AND MANUALS

- A8.1 At commencement of the Contract, the Manufacturer shall supply to Transnet Freight Rail, free of charge, 30 bound copies of the requisite "Alumino-thermic Welding Procedures" to ensure compliance with the process by Transnet Freight Rail personnel. In addition, during the currency of the Contract, the Manufacturer shall supply Transnet Freight Rail with such additional copies of the requisite "Alumino-thermic Welding Procedures" as Transnet Freight Rail requires to ensure compliance with the process.
- A8.2 In the event of Modifications and improvements to the products and processes by the Manufacturer during the currency of the Contract, the Manufacturer shall supply updated versions of the "Alumino-thermic Welding Procedures" to ensure compliance with the modifications. No extra payment shall be

entertained for these documents and the costs shall be considered as included in the tendered rates for Alumino-thermic products.

A9.0 MEETINGS

A9.1 The Manufacturer shall arrange, facilitate and attend regular liaison meetings in the Gauteng area of South Africa as follows:-

- (a) Minimum of once per year with Transnet Freight Rail's Supply Chain Services (SCS) and materials logistics officials.
- (b) Minimum of once every three months with Transnet Freight Rail's Infrastructure Engineering officials.

A9.2 No extra payment shall be made for these meetings and the cost shall be deemed to be included in the tendered rates for "Alumino-thermic" welding products. The Manufacturer may be accompanied by his agent, but the Manufacturer as principle shall attend. A Transnet Freight Rail official shall chair the meetings. The meetings shall be conducted in the English language.

A10.0 REFERENCES

A10.1 EN14730-1 (Track Alumino-thermic welding of rail)

A.10.2 Track Welding Manual (Latest Edition)

A10.3 Manual for Track Maintenance (Latest Edition)

A10.4 S116: Specification for supply of railway rails

A10.5 Spoornet: PWM 2/6-99

A10.6 EN13674-1-2003: Specification for Supply of New Rails

SECTION B:

THE SUPPLY OF ALUMINO-THERMIC WELDING KITS FOR USE WITH THE LONG LIFE CRUCIBLE IN RAIL WELDING

B1.0 INTRODUCTION

B1.1_ This section supersedes all previous documents and instructions relating to Alumino-thermic welding kits used for Rail Welding by Transnet Freight Rail.

B2.0 SCOPE

B2.1 This Specification includes:-

- B2.1.1 Definitions and Requirements
- B2.1.2 Manufacturing Processes
- B2.1.3 Quality Control
- B2.1.4 Testing Methods and Parameters
- B2.1.5 Retest
- B2.1.6 Contractors
- B2.1.7 Packaging and Dispatch

B3.0 DEFINITIONS AND REQUIREMENTS

The following specific terms relating to Alumino-thermic welding kits shall apply:-

B3.1 Alumino-thermic Welding Kits

B3.1.1A colour coded robust double wall cardboard box in accordance with Transnet Freight Rail's TRACK WELDING MANUAL (LATEST EDITION) containing a Thermit Welding Portions, an Automatic Tapping Thimble and Sealing Material, one pair of Preformed Moulds, a Pouring Plug, one Igniter and a 4 kg bag of Sealing Sand, identified and packed according to Clause B6.0.

B3.2 Thermit Welding Portion

B3.2.1 An individually sealed plastic bag with a minimum thickness of 150 micron containing a quantity of Alumino-thermic powder mixture used for the welding of rails together under field conditions.

B3.2.2 Each Thermit Welding Powder Mix shall be of sufficient quantity to liberate welding

metal that will completely fuse into both rails ends, fill collars, risers and leave enough excess metal on the crown for directional solidification purposes, in accordance to the relevant rail section and half moulds used.

B3.2.3 The determination of individual portion weights for the various rail sections and relevant welding processes, shall be the responsibility of the Manufacturer.

B3.2.4 Each portion bag shall be identified by a computer printed colour label stating:-

- (i) Batch and sequence number
- (ii) Portion quality, rail mass and relevant welding process
- (iii) Date of manufacture
- (iv) Total weight of the Thermit Welding Powder Mix.

B3.3 Automatic Tapping Thimble

B3.3.1A Refractory piece that automatically releases the exothermic steel from the crucible after the steel and slag has separated.

B3.3.2A separate measured quantity of sealing material must accompany each thimble so that it may be used to prevent a premature tap.

B3.3.3The use of asbestos as a plugging material is prohibited.

B3.3.4Tapping time of the thimble after the reaction is initiated must be between 20 – 40 seconds.

B3.3.5 The thimble must be magnetically attractable and compatible for use in the existing Long Life Crucibles.

B3.4 Preformed Moulds

B3.4.1 These are Refractory Moulds that fit onto a specified rail profile, strengthened by metal supports and have the ability to withstand temperatures of over 2000° C.

B3.4.2 Each pair of moulds is to be packed in a single wall cardboard box.

B3.4.3 The moulds shall be separated by a cardboard divider and shall be accompanied by a plug, igniter, and a thimble pack containing the thimble and

sealing material. The mould cardboard box shall be shrink wrapped.

B3.4.4 For easy identification, colour coded labels shall be used on the boxes indicating the date of manufacture, rail size and welding process.

B3.4.5 Patterns for the different rail profiles and various welding process used by Transnet Freight Rail are to be provided by *the* Manufacturer.

B3.4.6 The moulds shall be supplied to suit the existing equipment in use.

B3.4.7 The storage life of the moulds when kept under dry conditions, shall be at least three years from the date of manufacture.

B3.4.8 The outside texture and appearance of the moulds and plugs must be smooth and bonded in such a manner that disintegration of sand particles will not occur when rubbed by the fingers.

B3.4.9 The new moulds shall be devoid of cracks, cavities, air pockets or any other defects that may lead to loss of exothermic steel.

B3.4.10 Deformed, cracked, broken or disintegrating moulds will not be accepted.

B3.5 Igniter

B3.5.1 Igniters are pyrotechnics that initiate the Alumino-thermic reaction in a charged crucible.

B3.5.2 The flash point for this igniter shall be in excess of 200° C.

B3.5.3 Igniters shall be packed separately from the Alumino-thermic Weld portions in the welding kits.

B3.6 Sealing Sand

B3.6.1 Sealing Sand is used to tightly seal the mould and rail after clamping at all jointing faces surrounding the rail profile and the jointing face at the bottom of the rail flange in order to avoid a run-out and loss of exothermic steel.

B3.6.2 The 4 kg of Sealing Sand together with the synthetic bonding agent must be accompanied by a paper cup and sealed in a plastic bag (150 micron thickness) with directions of use printed onto the bag.

B3.6.3 The acceptance of different types of sealing methods shall be subject to full agreement between the Engineer and Supplier.

B3.7 Batch

B3.7.1 A batch shall consist of a number of portions, not exceeding 1100. Test welds, using Alumino-thermic welding portions from the production batch shall be performed and documented on each batch.

B3.7.2 These test samples shall be identified by a computer printed colour coded label conforming to the batch under production.

B4.0 MANUFACTURING PROCESSES

B4.1 The Alumino-thermic Welding Portions.

B4.1.1 The Alumino-thermic welding portions shall be manufactured from processed iron oxide atomized aluminium powder and pelletized ferroalloys.

B4.2 Automatic Tapping Thimble

B4.2.1 The automatic tapping thimble shall be manufactured from a high grade thermal shock resistant material.

B4.2.2 Non-asbestos plugging material shall regulate the tapping time.

B4.3 Preformed Moulds and Pouring Plug.

B4.3.1 The moulds and plugs shall be manufactured from high-grade quartz sand, thoroughly mixed with a binder, gassed with carbon dioxide and hardened in an oven.

B4.3.2 Raw materials that will have a deleterious effect on the permeability of the moulds or on the Alumino-thermic steel due to chemical interference will not be permitted.

B4.3.3 Additions shall be made to the mould and the plug raw material mix to increase the heat and moisture resistant characteristics.

B4.3.4 Moulds shall be supplied in a totally dried condition.

B4.4 Igniters

B4.4.1 Igniters shall be manufactured in the form of a pyrotechnic.

B4.5 Sealing Sand

64.5.1 Screened dry sand with bonding agents shall be used. With the addition of a maximum of 5 % moisture, the sealing sand shall form a suitable sealing bonding mixture. Alternative sealing methods may be proposed by the manufacturer and submitted to Transnet Freight Rail for approval. These proposals shall be in addition to the tenderers prices based on the 5% water or sand sealing method. Preference will be given to sealing methods that are water free and do not allow any deleterious water originating metallurgies or defects in the weld.

B5.0 CONTRACTORS

B5.1 Alumino-thermic welding materials supplied to contractors performing track welding for Transnet Freight Rail shall be subjected to similar tests as in Appendix A.

B6.0 PACKAGING AND DISPATCH

B6.1 Each Alumino-thermic portion shall be packed according to clause B3.2 in order to prevent spilling, ingress of foreign matter or contamination by water.

B6.2 Each pair of moulds and the thimble shall be packed according to clause B3.4.2, B3.4.3 and B3.4.4.

B6.3 Each bag of sealing sand shall be packed according to clause B3.6.3.

B6.4 Igniters shall be packed according to clause B3.5.3.

B6.5 All the above items shall be packed separately into a master robust cardboard container that complies to Transnet Freight Rail's TRACK WELDING MANUAL (LATEST EDITION) with the following markings printed onto the boxes. The tenderer shall design all packaging to accommodate the stacking requirements indicated in Clause B6.5.1. Alternatively, the tenderer shall give recommendations in his tender as to the stacking requirements and mark his boxes accordingly.

B6.5.1 Top surface of the box:-

**HANDLE WITH CARE
DO NOT STACK MORE THAN 5 HIGH**

B6.5.2 Small sides of the box:-

**KIT FOR ALUMINO-THERMIC MATERIAL FOR 1 RAIL JOINT FOR
_____KG/M RAIL FOR USE WITH _____ RAIL GAP**

FOR USE ONLY WITH LONG LIFE CRUCIBLE

***THE CONTENTS OF THIS BOX MUST NOT BE USED WITH A SINGLE SHOT
OR DISPOSABLE CRUCIBLE***

B6.5.3 On the other sides:

MANUFACTURED BY:-

GENERAL

B6.6 The Manufacturer shall ensure that the material is dispatched in accordance with the instruction of the Engineer.

B6.7 Material which does not comply with these specifications, shall not be accepted, and any material proved to be defective, due to manufacturing deficiencies, after delivery shall be returned to the Manufacturer at his own expense.

“PREVIEW COPY ONLY”

SECTION C:

THE SUPPLY OF LONG LIFE REFRACTORY CRUCIBLES FOR RAIL WELDING

C1.0 INTRODUCTION

C1.1 This section supersedes all previous documents and instructions relating to Long Life Refractory Crucibles used for rail welding by Transnet Freight Rail.

C2.0 SCOPE

C2.1 This section includes:-

C2.1.1 Definitions and Requirements

C2.1.2 Manufacturing Processes

C2.1.3 Quality Control

C2.1.4 Packaging, Storage, Handling and Dispatch

C3.0 DEFINITIONS AND REQUIREMENTS

The following specific terms relating to Refractory Crucibles shall apply:-

C3.1 Long Life Refractory Crucible

C3.1.1A chemically inert, extremely thermal shock resistant, refractory lining that can repeatedly withstand temperatures of $>2300^{\circ}\text{C}$, which is initiated within approximately 20 seconds from ambient temperature by the exothermic reaction.

C3.1.2 The tapping hole of the Long Life Refractory Crucible must be compatible for use with the existing early release Automatic Tapping System (ATSER), Thimble Applicator and Thimble Drift.

C3.1.3 The Long Life Refractory Crucible must be formed in a throwaway mild steel shell.

C3.1.4 The Long Life Refractory Crucible shall be absolutely compatible with existing stock of Alumino-thermic welding portions and consumables as well as existing exothermic welding equipment.

C3.2 Extension Sleeve

C3.2.1 A heavy-duty heat resistant steel extension sleeve provided for wide gap welding processes.

C3.2.2 The extension sleeve must be supplied with an integral skirt in order to deflect splashes of molten steel or slag generated during the exothermic reaction.

C3.2.3 The extension sleeve must be fitted with a section that enables it to be damped onto the Long life Refractory Crucible.

C3.3 Clamping Ring

C3.3.1 A spun steel section complete with lifting handles and fastening screw that joins the Long Life Refractory Lining to the extension sleeve.

C3.4 Crucible Cover

C3.4.1 A spun steel section, complete with lifting handles that helps contain splashes of molten steel or slag ejected during the exothermic reaction.

C3.5 Refractory Sealing Paste

C3.5.1 A refractory paste that is applied to the top of the Long Life Crucible before the extension sleeve is placed in position.

C3.5.2 During drying, the refractory paste shall form a seal between the Long Life Refractory Liner and the Extension sleeve in order to prevent a loss of exothermic steel after the reaction.

C3.5.3 The Refractory paste shall be contained in a hermetically sealed container.

C3.5.4 The Refractory paste contents shall be sufficient to seal one Long Life Refractory Crucible.

C3.5.5 The Refractory sealing paste shall be of a type that is applied either by spatula or mastic gun.

C3.6 Thimble drift

C3.6.1A special designed steel tool that is used for:-

- 1) Breaking and removing of the Automatic Tapping Thimble after each reaction.
- 2) Cleaning the throat of the Long Life Crucible.
- 3) Removal of accumulated slag from the crucible wall when necessary.

C3.7 Thimble applicators

C3.7.1A special designed steel tool fitted with a magnet and spreader cover that is used for:

- 1) Positioning of the Automatic Tapping Thimble into the tapered aperture at the bottom of a hot Long Life Refractory Crucible.
- 2) Distributing the slag powder evenly around the aluminium cap of the thimble and to prevent ingress into the thimble and subsequent detrimental effect on the exothermic weld metallurgy.

C4.0 MANUFACTURING PROCESSES

C4.1 Long Life Refractory Crucibles

C4.1.1 Detailed drawings of the long life Refractory crucible shall be submitted to Transnet Freight Rail for approval. The drawings shall be submitted with the tender. All long life Refractory crucibles shall be manufactured to the approved drawings and this specification. All drawings approved by Transnet Freight Rail shall be considered part of this Specification.

C4.1.2 The Long Life Refractory Crucibles shall be compatible for all types of rails and exothermic welding processes employed by Transnet Freight Rail.

C4.1.3 The Long Life Refractory Crucibles shall be formed in a spun mild steel shell, with specified holes at certain heights for moisture to escape.

C4.1.4 The Long Life Refractory Crucibles shall be manufactured from high density chemically inert raw materials.

C4.1.5 The use of magnesite and other chemical reactive refractories is forbidden.

C4.2 Refractory Sealing Paste

C4.2.1 The Refractory Sealing Paste shall be manufactured from screened dry sand with clay additive.

C4.2.2 A wetting agent must render the refractory sealing paste applicable by spatula or mastic gun.

C5.0 TESTING METHODS AND PARAMETERS

C5.1 Long Life Refractory Crucibles

C5.1.1 The Inspector reserves the right to *select* Long Life Refractory Crucibles for testing purposes, at random, and at any time, from the Manufacturer's stores or production line.

C5.1.2 The following tests will be witnessed by the Inspector:-

- (1) Weight of dry Long Life Refractory Crucible plus shell. This weight shall comply with the minimum weight specified in the drawings submitted for approval by Transnet Freight Rail at the time of tendering.
- (2) Fit-up of thimble in Long Life Crucible throat, to ensure no by-passing of the Thermit steel between the thimble and the Long Life Crucible throat.

C6.0 PACKAGING AND DISPATCH

C6.1 The Long Life Refractory Crucibles shall be supplied in a dry state.

C6.2 The Long Life Refractory Crucible together with the refractory sealing paste and operating instructions must be sealed in a plastic bag and packed in a robust cardboard container.

C6.3 The dimensions of the cardboard container shall be 305 mm (L) x 305 mm (W) x 300 mm (H).

C6.4 The gross weight of the package shall be approximately 16 kg.

C6.5 The cardboard container shall comply to Transnet Freight Rail's TRACK WELDING MANUAL (LATEST EDITION) with the following markings printed on the box:-

C6.5.1 Top surface of the box:-

STACK MAXIMUM 4 HIGH

NB: The tenderer shall advise with his tender the stacking requirements and if different from Clause C6.5.1 above, he shall amend accordingly.

C6.5.2 Two sides of the box:-

**HANDLE WITH CARE
LONG LIFE CRUCIBLE**

**CONTENTS: 1. CRUCIBLE LINING
2. SEALING PASTE**

GROSS WEIGHT: 16 KG

C6.5.3 Two sides of the box:-

NAME OF MANUFACTURER:-

C6.6 The Manufacturer shall ensure that the material is dispatched in accordance with the instructions of the Engineer.

C6.7 Material that does not withstand this specification will not be accepted, and any material proved to be defective due to manufacturing deficiencies, shall be returned to the Manufacturer at his own expense.

C6.8 The minimum life expectancy of the long life refractory crucible, under typical Transnet Freight Rail conditions shall be 10 welds of 48 kg/m profile and 25 mm gap type. The manufacturer shall design and manufacture the long life refractory crucibles to achieve this requirement.

**SECTION D:
THE SUPPLY OF ALUMINO-THERMIC WELDING KITS USING THE
"SINGLE USE" CRUCIBLE METHOD FOR RAIL WELDING**

D1.0 INTRODUCTION

D1.1 This section supersedes all previous documents and instructions relating to Alumino-thermic welding kits used for Railway Welding with the "Single Shot" crucible method by Transnet Freight Rail. The term "SINGLE SHOT" crucible is not specific to any one manufacturer's brand name or product and is used in this Specification to describe a crucible system that can only be used once for the casting of an "Alumino-thermic" weld.

D2.0 SCOPE

D2.1 This section includes:-

D2.1.1 Definitions and Requirements

D2.1.2 Manufacturing Processes

D2.1.3 Quality Control

D2.1.4 Packaging and Dispatch

D3.0 DEFINITION AND REQUIREMENTS

The following specific terms relating to Alumino-thermic welding kits for the "SINGLE SHOT" method shall apply:-

D3.1 Alumino-Thermic Welding Kits

D3.1.1A colour coded robust double wall cardboard box in accordance with Transnet Freight Rail's TRACK WELDING MANUAL (LATEST EDITION) containing alumino-thermic portions, "SINGLE SHOT" crucible, moulds, and all consumables necessary for the satisfactory completion of an alumino-thermic weld.

D3.1.2The Manufacturer shall specify with his tender all ancillary, equipment

needed for the safe and correct performance of an Alumino-thermic weld using this kit.

D3.1.3 The kit shall be as complete as possible to avoid the need for ancillary equipment.

D3.1.4 The welding process shall be designed and the kits manufactured to produce and complete a satisfactory Alumino-thermic weld by one Transnet Freight Rail trained welder and two assistants in a minimum of 60 minutes total track occupation.

D3.1.5 The Manufacturer shall specify in his tender the recommended preheating and post heating processes.

D3.2 Alumino-Themic Welding Portion

D3.2.1 An individually sealed plastic bag with a minimum thickness of 150 micron containing a quantity of Alumino-thermic powder mixture used for the welding of rails, together under field conditions. The portion shall be chemically, metallurgically and physically compatible with the "SINGLE SHOT" crucible system.

D3.2.2 Each Alumino-thermic Welding Powder Mix shall be of sufficient quantity to liberate welding metal that will completely fuse into both rails ends, fill collars, risers and leave enough excess metal on the crown for directional solidification purposes, in accordance to the relevant rail section crucible and moulds used.

D3.2.3 The determination of individual portion weights for the various rail sections and relevant welding processes, shall be the responsibility of the Manufacturer.

D3.2.4 Each portion bag must be identified by a computer printed colour label stating:

- ii) Batch and sequence number
- iii) Portion quality, rail mass and relevant welding process
- iv) Date of manufacture
- v) Total weight of the Thermit Welding Powder Mix.

D3.3 "SINGLE SHOT" Crucible and Preformed Moulds

D3.3.1. The kit shall contain a compatible "SINGLE SHOT" refractory crucible complete with automatic tapping system, preformed refractory moulds, plugs, sealing compound and igniter.

- D3.3.2 The "SINGLE SHOT" crucible shall be chemically inert and have, no metallurgical effect on the Alumino-thermic weld.
- D3.3.3 The "SINGLE SHOT" crucible shall fit automatically and firmly on the moulds at all times during the preparation, ignition and casting of the Alumino-thermic weld. The fit and alignment of the moulds on the rail shall be checked closely by the welder, and must be firm and not influenced by the crucible, or the Alumino-thermic welding process, reaction or casting.
- D3.3.4 Tapping time of the "SINGLE SHOT" crucible shall be automatic after the reaction is initiated and shall be between 20 - 30 seconds. The manufacturer shall state the tapping time in his tender and all material supplied shall comply with this tapping time range.
The tapping time shall allow for all metallurgical mixing of the liquid steel and separation of the slag. No deleterious metallurgies shall be permitted.
- D3.3.5 The preformed Refractory Moulds shall fit onto a specified rail profile or profiles in the case of stepped moulds for worn rail profiles. They shall be strengthened by metal supports and have the ability to withstand temperatures of over 2000° C.
- D3.3.6 Each set of moulds is to be packed in a single wall cardboard box. The mould cardboard box shall be shrink-wrapped.
- D3.3.7 For easy identification, colour coded labels must be used on the boxes indicating the date of manufacture, rail size and welding process.
- D3.3.8 Patterns for the different rail profiles and various welding process used by Transnet Freight Rail are to be provided by the Manufacturer.
- D3.3.9 The storage life of all of the separate component parts of the "SINGLE SHOT" crucible Alumino-thermic welding kit when kept under dry conditions, shall be at least three years from the date of manufacture. This shall include for all transport environments including shipping by sea.
- D3.3.10 The outside texture and appearance of the moulds and plugs must be smooth and bonded in such a manner that disintegration of sand particles will not occur when rubbed by the fingers. The mould and riser design shall be such that no deleterious metallurgies or stress raisers are created at any stage in the Alumino-thermic welding process. This includes the process of removal of the risers after casting of the welds. The design shall be such that no adverse metallurgies are created which may have an effect of reducing the fatigue life of the weld
- D3.3.11 The new moulds and "SINGLE SHOT" crucibles shall be devoid of cracks, cavities, air pockets or any other defects which may lead to loss of exothermic steel;

D3.3.12 Deformed, cracked, broken or disintegrating moulds or "SINGLE SHOT" crucibles shall not be accepted.

D3.4 Igniter

D3.4.1 Igniters are pyrotechnics that initiate the Alumino-thermic reaction in a charged crucible.

D3.4.2 The flash point for this igniter shall be in excess of 200⁰ C.

D3.4.3 Igniters shall be packed separately from the Alumino-thermic Weld portions in the welding kits.

D3.5 Sealing Method

D3.5.1 The Manufacturer shall state in his tender full details of the proposed method of sealing the moulds against the rails. Sufficient product and applicator for one complete weld including for waste shall be included in the kit. The sealing product shall be sealed separately in a hermetically sealed container inside the kit box. The sealing product shall not allow moisture into the weld and shall not allow any deleterious metallurgies to form inside or on the surface of the weld i.e. porosities, holes, gas bubbles.

D3.5.2 The acceptance of different types of sealing methods shall be subject to full agreement between the Engineer and Supplier.

D3.6 Batch

D3.6.1 A batch shall consist of a number of portions, not exceeding 1100. Test welds, using Alumino-thermic welding portions from the production batch shall be performed and documented on each batch.

D3.6.2 These test samples shall be identified by a computer printed colour coded label conforming to the batch under production.

D4.0 MANUFACTURING PROCESSES

D4.1 The Alumino-thermic welding portions

D4.1.1 The Alumino-thermic welding portions shall be manufactured from processed iron oxide, atomized aluminium powder and pelletized ferroalloys.

D4.2 SINGLE SHOT Crucible

D4.2.1 The "SINGLE SHOT" crucible shall be manufactured from a high-grade thermal shock resistant material. The material shall be chemically and metallurgically inert and shall have no deleterious effects on the Alumino-

thermic weld.

D4.2.2 The "SINGLE SHOT" crucible shall tap automatically. The automatic tapping components shall also be chemically inert and have no deleterious effects on the Alumino-thermic weld.

D4.2.3 The "SINGLE SHOT" crucible shall safely contain the Alumino-thermic portion at all stages of the process prior to tapping.

D4.2.4 The minimum life expectancy of the "SINGLE SHOT" crucible shall be one weld.

D4.2.5 The "SINGLE SHOT" crucible shall be designed and manufactured to ensure the correct process is automatically achieved.

D4.2.6 The "SINGLE SHOT" Crucible shall be designed and manufactured to ensure full reaction of the Alumino-thermic portion, the correct metallurgical mix of alloys and separation of slag, and prevent splashing of the liquid steel or slag.

D4.2.7 As a "Special" on demand by Transnet Freight Rail a "SINGLE SHOT" crucible for use inside tunnels shall be designed, manufactured and supplied which will comply with this Specification and shall also contain all noxious gases produced in the Alumino-thermic welding process. Separate rates for this "Special" shall be Included in the tender

D4.3 Preformed moulds and pouring plug

D4.3.1 The moulds and plugs shall be manufactured from a high grade quartz sand, thoroughly mixed with a binder, gassed with carbon dioxide and hardened in an oven.

D4.3.2 Raw materials that will have a deleterious effect on the permeability of the moulds or on the Alumino-thermic steel due to chemical interference will not be permitted.

D4.3.3 Additions shall be made to the mould and the plug raw material mix to increase the heat and moisture resistant characteristics.

D4.3.4 Moulds shall be supplied in a totally dried condition.

D4.3.5 The moulds shall be designed, manufactured to accommodate the following rail profiles: 30kg/m, 40kg/m, 48kg/m, 57kg/m, S60, 60E1 and UIC 60.

D4.3.6 Stepped moulds to accommodate worn rail profiles shall be designed and manufactured for steps of 3mm, and 6mm vertical crown wear on the above profiles.

D4.3.7 Special moulds shall be designed, manufactured and supplied for use on side - worn rails of the above rail profiles. Up to a maximum of 26 mm side wear, shall be accommodated. Separate rates for these "Specials" shall be advised in the tender.

D4.3.8 Details of the mould design and risering system, the expected fatigue life including "S-N" curves shall be supplied by the Manufacturer with his tender.

D4.4 Igniters

D4.4.1 Igniters shall be manufactured in the form of a pyrotechnic.

D4.5 Sealing compound

D4.5.1 Screened dry sand with bonding agents shall be used. With the addition of 5% moisture, the sealing sand must form a suitable sealing bonding mixture.

Alternative sealing methods may be proposed by the Manufacturer and submitted to Transnet Freight Rail for approval. These proposals shall be in addition to the tenderers prices based on the 5% water/sand sealing method.

D5.0 PACKAGING AND DISPATCH

D5.1 Each Alumino-thermic portion shall be packed according to clause D3.2 in order to prevent spilling, ingress of foreign matter or contamination by water,

D5.2 Each pair of moulds and the thimble shall be packed according to clause D3.4.2, D3.4.3 and D3.4.4.

D5.3 Each bag of sealing sand shall be packed according to clause D3.6.3.

D5.4 Igniters shall be packed according to clause D3.5.3.

D5.5 All the above items shall be packed separately into a master robust cardboard container which complies to Transnet Freight Rail's TRACK WELDING MANUAL (LATEST EDITION) with the following markings printed onto the boxes.

The tenderer shall design all packaging to accommodate the stacking requirements indicated in Clause D9.5.1 below. Alternatively, the tenderer shall make recommendations in his tender as to the stacking requirements and mark his boxes accordingly.

D5.5.1 Top surface of the box:-

**HANDLE WITH CARE
DO NOT STACK MORE THAN 5 HIGH**

D5.5.2 Small sides of the box:-

**KIT FOR ALUMINO-THERMIC MATERIAL FOR 1 RAIL JOINT FOR
_____ KG/M RAIL FOR USE WITH _____ RAIL GAP
FOR USE ONLY WITH SINGLE USE CRUCIBLE**

**THE CONTENTS OF THIS BOX MUST NOT BE USED WITH LONG LIFE
CRUCIBLE**

D5.5.3 On the other sides:

MANUFACTURED BY: _____

GENERAL

D5.6 The Manufacturer shall ensure that the material is dispatched in accordance with the instruction of the Engineer.

D5.7 Material which does not comply with these specifications, shall not be accepted, and any material proved to be defective, due to manufacturing deficiencies, after delivery shall be returned to the Manufacturer at his own expense.

“PREVIEW COPY ONLY”

APPENDIX A:

1.0 TESTING METHODS AND PARAMETERS

1.1 The inspector reserves the right to select at random, and at any time, from the Manufacturer's stores or production line Alumino-thermic Welding materials for testing purposes.

1.2 The following tests will be witnessed by the inspector.

1.2.1 Preheating and Post Heating Process:

1.2.1.1 The type of equipment used to preheat the rails as well as the procedures are to be specified by the manufacturer.

1.2.2 Tapping Time After Ignition of the Portion

1.2.2.1 The reason for the tapping time test of the Thermit steel into the moulds is to ensure that the thimble assembly is of such a nature to allow the Thermit reaction to be complete, and the 20 - 30 seconds time period adhered to.

1.2.2.2 The tapping time will started on a stopwatch as soon as the igniter is placed into the Thermit welding portion and will be stopped as soon as the weld metal is released from the crucible.

1.2.3 Hardness Test and Width of Spherodised Zones

1.2.3.1 The reason for the hardness test is to ensure that the weld metal is approximately 20 Brinell points higher than the parent rail steel on new rails and the spherodised zones are neither too soft nor too wide.

1.2.3.2 A Brinell test shall be carried out using a 3000 kg of load and 10 mm diameter tungsten carbide ball. Three impressions shall be made on the weld centre line and one each to the left and right of the weld, outside the heat-affected zones on the running surface of the rail. In addition the surface of the rail crown shall be etched to reveal the spherodised zones. The widths of the spherodised zones at longitudinal centre line of rail crown and the hardness in the middle of the spherodised zones shall be measured. The maximum width of spherodised zone measured on the etched test piece shall be 6 mm.

1.2.3.3 The hardness profile over the spherodised zones shall be measured with a Vickers hardness machine and the minimum hardnesses in the spherodised zones shall be:-

Grade 900 A	220 HV 30
Grade 1100	270 HV 30
Head Hardened	280 HV 30

1.2.3.4 The required hardness range of the as cast weld metal must conform to the following hardness ranges of the different rail steels.

RAIL TYPE	HARDNESS (Weld metal)
700 N/mm ² tensile strength	212 - 248 Brinell
800 N/mm ² tensile strength	228 - 269 Brinell
900 N/mm ² tensile strength	255 - 293 Brinell
1100 N/mm ² tensile strength	311 - 375 Brinell
Head Hardened Rails	360 - 400 Brinell

1.2.4 Static Bend Test

1.2.4.1 Various masses of 0,6 m lengths of new or worn rails and different rail qualities will be supplied by Transnet Freight Rail to the Manufacturer, free of charge, for the sole purpose of testing the Alumino-thermic Welding Materials. The rails are to be reused until their length is insufficient for test purposes. Rails too short for reuse as test rails are to be disposed of as instructed by the Engineer.

1.2.4.1 All welds shall be performed strictly in accordance to the manufacturers "TWM", except for final profile finish grinding. All details of the welding parameters employed shall be recorded and these include details of preheating.

1.2.4.2 The welds shall be allowed to cool for at least four hours before further testing.

1.2.4.3 The static bend test will be done according to Annexure F of specification EN 14730-1:2006.

The load and deflection parameters of the static bend test shall be continuously measured and recorded on a computerized system. A load / deflection graph shall be produced for each test performed.

In addition to the computerized measuring system, the test facility shall provide an independent real time measuring and display system of load and deflection. This display shall be readily visible to the Transnet Freight Rail Inspector.

The static bend test apparatus shall be calibrated and certified by a Transnet Freight Rail approved certification agency. The certification shall be immediately on award of the contract to supply Alumino-thermic kits to Transnet Freight Rail and then recertified at 12 monthly intervals.

1.2.4.4 The minimum fracture loads required shall be as follows:

RAIL SECTION (KG/M)	30	40	48	57	60
MIN. LOAD AT FAILURE (kN.)	260	400	600	650	900

1.2.5 Deflection Measurement

1.2.5.1 The deflection of the rail at midspan after failure shall be recorded. This is an indication of the elastic and permanent deformation.

1.2.5.2 The minimum deflection requirements shall be as follows:

RAIL SECTION	30	40	48	57	60
DEFLECTION	12	12	10	10	6

1.2.6 Visual Inspection of the Fractured Surface

1.2.6.1 There must be no evidence of lack of fusion, gross porosity, slag inclusions or hot tearing on the fractured surfaces.

1.2.7 Chemical Composition

1.2.7.1 The chemical composition of the Thermit portions shall be compatible to Thermit Weld the following rail steel qualities.

ELEMENT	WC 900 GRADER %	WC 1100 CR/MN %
Carbon	0.60 - 0.8	0.65 - 0.8
Manganese	0.8 - 1.3	0.8 - 1.3
Silicon	0.1-0.5	0.3 - 0.9
Chromium	Nil	0.7 - 1.3
Phosphorus	0.05 max	0.03 max
Sulphur	0.05 max	0.03 max
Nickel	0.25 max	0.25 max
Molybdenum	0.05 max	0.05 max
Copper	0.3 max	0.3 max

2.0 RETEST

2.1 In the event of:

2.1.1 A Thermit weld fracturing below the minimum acceptable breaking load, with a reduced deflection reading or,

2.1.2 The fracture occurs straight through the centre line of the weld or,

2.1.3 The fracture occurs as a direct result of flaws within the parent rail or,

2.1.4 The weld display inadequate riser material to enable satisfactory trimming to be carried out, then,

2.1.5 The Engineer or Inspector shall direct that two further such tests be carried out, by using two Thermit portions taken at random from the same batch.

2.1.6 Failure on one or more of the retests to comply with specific requirements shall result in the entire batch being rejected.

Test Specifications

**EUROPEAN STANDARD prEN 14730-1:2006 (E) Railway applications - Track -
Aluminothermic welding of rails - Part 1: Approval of welding processes**

and X-ray spec

S116 Specification

Manual for Track Maintenance (Latest Edition)

TRACK WELDING MANUAL (LATEST EDITION)

“PREVIEW COPY ONLY”

Annexure A

REQUEST FOR PROPOSAL

**GUIDELINES FOR COMPLETION OF
SUPPLIER DEVELOPMENT BID DOCUMENT**

“PREVIEW COPY ONLY”

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Note

For the purposes of this document, any reference to a/the "**Service Provider**" shall be construed to mean a reference to a Respondent (in terms of this RFP) and/or to a successful Respondent (to whom the business is to be awarded), as so indicated by the context hereinafter.

"PREVIEW COPY ONLY"

1 What is Supplier Development?

The Supplier Development (**SD**) Programme is an initiative of the Department of Public Enterprises (**DPE**) supported by Transnet. The aim of SD is to increase the competitiveness, capacity and capability of the South African supply base where there are comparative advantages and potential competitive advantages of local or regional supply. This can be achieved through skills transfer, increasing the local content of items procured, as well as building new capability in the local supplier base. In addition, SD has its roots grounded firmly around the transformation of South Africa and the empowerment of previously disadvantaged individuals and enterprises.

2 Background and Guidance on the Supplier Development Objectives for South Africa

As a developing economy with inherent structural and social imbalances, South Africa is facing the significant economic challenge of increasing growth in a manner that includes all South Africans. The historical lack of investment in infrastructure in South Africa has had significant negative impacts on local industry, resulting in a loss of key skills and a decrease in manufacturing industry capabilities. To respond to this, Government policies have been designed to address these imbalances and to act as a catalyst of change for the benefit of South Africa.

One of these Government policies, the New Growth Path (**NGP**), aims to enhance growth, employment creation and equity by reducing the dependencies of South African industries on imports, and promoting the development of skills and capabilities that are in short supply within the country. It identifies strategies that will enable South Africa to grow in a more equitable and inclusive manner and promotes the development of new industry to attain South Africa's developmental agenda.

Transnet's SD is closely aligned to the NGP objectives and as a result is able to fulfil its commitment to sustainability within South Africa whilst at the same time addressing other corporate objectives, including increasing productivity and efficiency, volume growth, capital investment, financial stability, funding, human capital, SHEQ regulatory compliance and improving customer service.

The combined objectives of Transnet and Government can be realised through:

- aggressively implementing capital investment plans which will result in competitive local industries;
- improving operational efficiency;
- using procurement to influence the development of the local supplier industry; and
- ensuring it creates sufficient opportunities for the participation of previously disadvantaged groups in the economy.

This will lead to Transnet achieving its long-term objective of increasing both shareholder and societal value using its procurement expenditure to ensure local development through sustainable localisation of its supply chain, and the inclusion of the previously disadvantaged individuals in the economy in a manner that is beneficial to Transnet, South African industry, and the population of South Africa. As a result this State Owned Enterprise (**SOE**) is able to fulfil its responsibility as the biggest player in the South African freight logistics chain whilst complementing the objectives of Government.

3 Transnet’s Supplier Development Objectives and Framework

To aid its implementation of SD, Transnet has adapted an existing framework from the DPE. This framework allows for a basic set of principles to be applied to appropriately target SD initiatives. Supplier Development initiatives aim to assist local suppliers in developing their competitive advantage through increasing their capability and capacity potential. Hence the framework has been termed the Increased Competitiveness, Capability and Capacity (IC3) Supplier Development Classification Matrix.

This framework encapsulates the types of SD opportunities which Transnet currently considers effective and allows Transnet to move its SD structure away from a dynamic policy environment towards a framework that is designed around general Supplier Development objectives. This enables Transnet to adopt a standard structure but also allows the flexibility to reconsider emphasis on certain aspects as objectives change. The IC3 Matrix (refer to Figure 1 below) categorises SD opportunities in a matrix based on their value, extent of industrial leverage and strategic importance to Transnet. Further categorisation of opportunities into the relevant quadrants is based on supplier-buyer power, industrial complexity, risk and the length of procurement period.

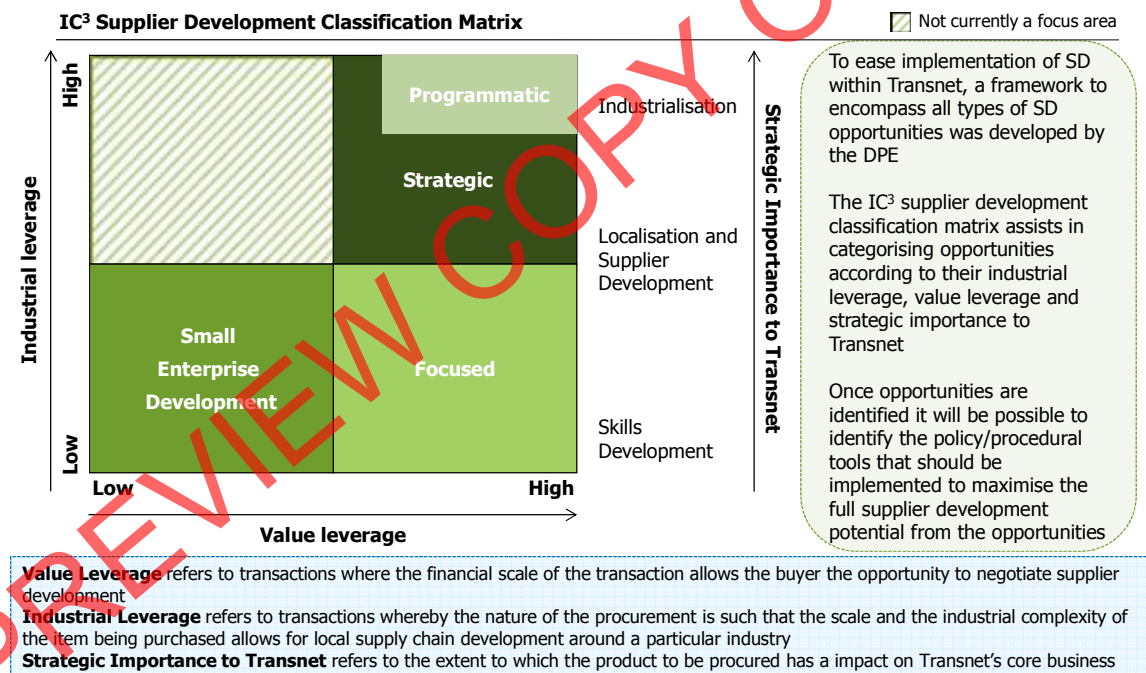


Figure 1: The IC3 Supplier Development Classification Matrix

In order for Service Providers to successfully meet the needs of a particular initiative, a detailed understanding of each quadrant is required.

3.1 Programmatic

Programmatic initiatives follow a longer than normal planning horizon and generally exceed the funding capacity of Transnet’s balance sheet. Collaboration between the SOE and Government is achieved through focused task teams whereby infrastructure development and industrialisation is achieved through joint support and in some cases public spending. Investment is focused in plant, technology and skills in both intermediate and advanced capabilities to develop competitive advantage.

3.2 **Strategic**

Strategic initiatives follow a three to five year planning horizon, involving investment in at least plant, technology and/or skills in intermediate capabilities. This enforces the need for multinational corporations and Original Equipment Manufacturers (**OEMs**) to develop a certain percentage of their products locally. Strategic initiatives can therefore be used to achieve localisation objectives by increasing the competitiveness, capability and efficiency of local suppliers. Strategic initiatives can sometimes focus on advanced capabilities but will in most cases require Government support to develop local capability.

3.3 **Focused**

Focused initiatives include all high value transactions with limited industrial leverage and medium to low strategic importance. These initiatives address short to medium-term contracts that can be leveraged to encourage Supplier Development, with a focus on investment in technology or skills to enhance existing local capability. Emphasis will largely be placed on benefiting previously disadvantaged individuals. The overall result improves the socio-economic environment by creating competitive local suppliers and furthers objectives of empowerment, transformation and regional development.

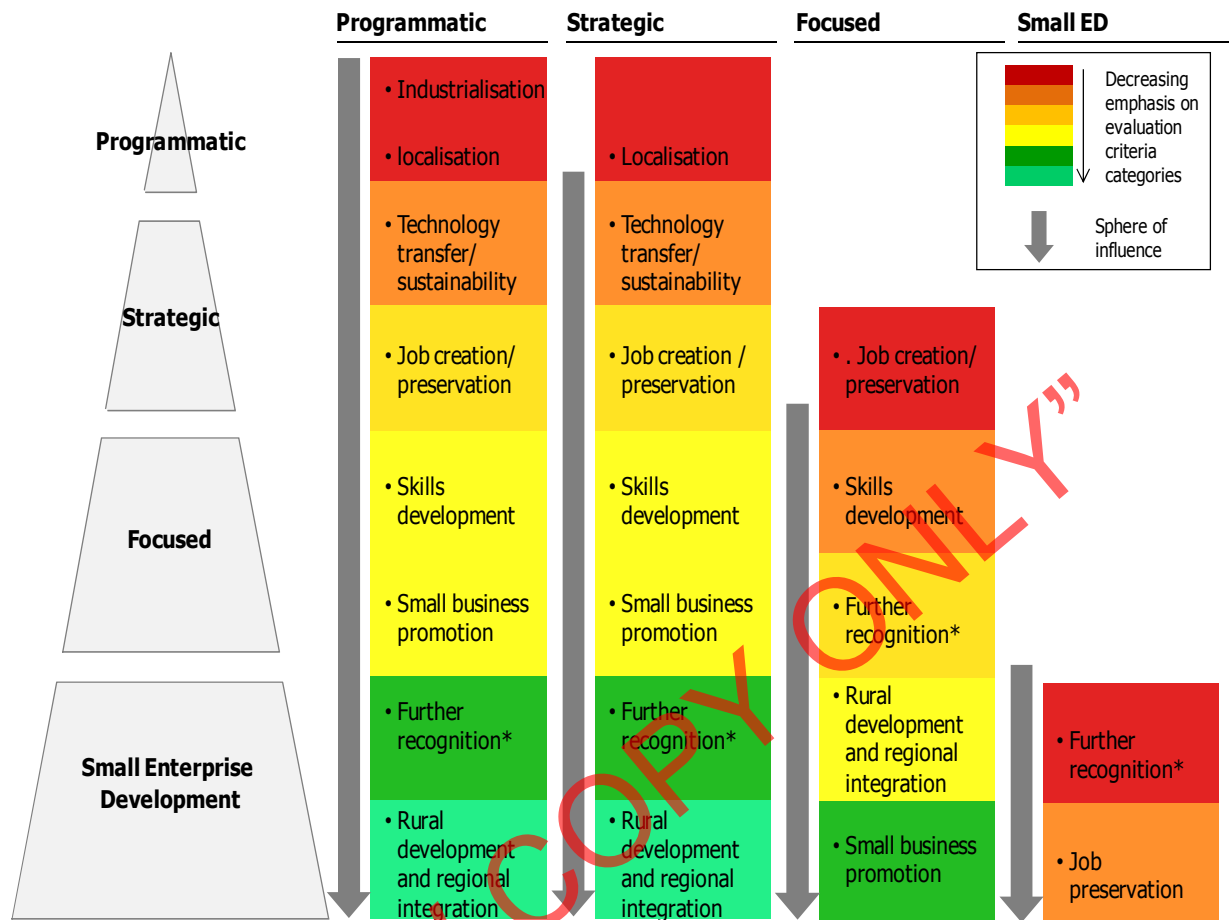
3.4 **Small Enterprise Development**

Small Enterprise Development initiatives are typically of low value and have no industrial leverage as they are characterised by typically low complexity goods and high competition. These initiatives concentrate on increasing the capability of small local suppliers and are targeted toward historically disadvantaged individuals and communities, providing basic skills development and improving local employment and quality job creation. It includes a wide range of non-financial services that help entrepreneurs start new business and grow existing ones.

4 **Response based on the IC³ Matrix Quadrants**

Based on the supplier-buyer power, industrial complexity, risk and the length of procurement period, the Service Provider is expected to formulate a SD Bid Document to identify the opportunities that it will pursue. Ideally the SD Bid Document should address factors that are specific to the applicable quadrant of the IC³ matrix.

Transnet has identified a number of opportunities which may aid a Service Provider in formulating its response based on each quadrant. Each of the opportunities identified by the Service Provider should have a direct or indirect effect on the value it creates for the country in order to maximise the socio-economic impact.



*Points allocated in further recognition of certain components of BBBEE in line with Transnet and government objectives

Note: This illustration is indicative and varies on business and Macro Economic need

Figure 2: Transnet value capture through supplier influence

4.1 Programmatic

The strategic objective of “Programmatic transactions” is to assist Government to achieve its industrialisation objectives through the development of the local supplier base, in order to increase the cost efficiency of SOE procurement, support and maintenance programmes. In order to satisfy this objective a number of focus areas and key outcomes have been identified:

- a) Programmatic Focus Areas -
 - Technology transfer
 - Skills development related to the manufacturing process and the industry
 - Development of new technology and innovation
 - Investment in plant
 - Development of local companies aligned to empowerment objectives
- b) Key Outcomes -
 - Industrialisation/localisation
 - Technology transfer
 - Skills development

4.2 **Strategic**

The main objective of Strategic transactions is to leverage local downstream suppliers through large-scale SOE procurement in order to develop a competitive local supplier base. In response to these objectives the following are the specific focus areas and key outcomes applicable:

- a) Strategic Focus Areas -
 - Transfer of technology and innovation to local suppliers from foreign OEM's
 - Skills development related to the industry
 - Development of local companies aligned to empowerment objectives
- b) Key Outcomes -
 - Localisation
 - Increased technology transfer
 - Skills development
 - Job creation/preservation

4.3 **Focused**

Focused initiatives assist local suppliers to improve their performance, enhance their existing production and skills capabilities with emphasis being placed on benefiting previously disadvantaged individuals and rural development. In order to satisfy these objectives a number of focus areas and key outcomes have been identified:

- a) Focused Focus Areas -
 - Developing a local supplier base that supports preferential procurement outcomes
 - Developing skills within the specific industry
 - Creating opportunity for job preservation
 - Reducing income inequality in specific regions
- b) Key Outcomes -
 - Empowerment
 - Skills development
 - Rural development
 - Job creation/preservation

4.4 **Small Business Development**

Enterprise Development (ED) objectives are centred around assisting local suppliers to improve their skills by placing increased emphasis on benefiting previously disadvantaged individuals and rural development in line with the Broad-Based Black Economic Empowerment (B-BBEE) strategy. The following focus areas and key outcomes have been identified:

- a) Small Business Development Focus Areas -
 - Providing small businesses with opportunities and preferential trading terms, increased focus on black woman-owned enterprises, focus on the youth, people with disabilities and region- specific initiatives
 - Empowering previously disadvantaged individuals to create their own businesses resulting in quality job creation

- b) Key Outcomes -
- Empowerment
 - Rural development
 - Skills development
 - Job creation/preservation

Based on these focus areas and key outcomes, a Service Provider would need to actively focus on the quadrant-specific requirements in order to maximise the potential commercial benefit for Transnet, South Africa and themselves. In doing so value can be created across all lines of reporting resulting in continued relations.

5 Supplier Development Category Definitions and High Level Descriptions

5.1 Industrialisation

Industrialisation refers specifically to industrial capability building that will result in globally leading capabilities developed within South Africa.

Criteria	Description
Value of investment in plant	Quantification of the monetary value invested in machinery, equipment and/or buildings as a result of this RFP
Percentage of local content utilised in the investment of plant	Percentage value invested in machinery, equipment and/or buildings that are sourced from local companies
Reduction in import leakage	A percentage indication of the increase in locally supplied products and therefore the resultant decrease in imports as a result of the award of a contract
Potential increase in export content	The percentage increase in exports that will result from increased industrial capability locally in relation to the award of a contract

5.2 Localisation

Localisation refers specifically to industrial capability building that focuses on value-add activities of the local industry through manufacturing or service-related functions.

Criteria	Description
Percentage local content	Planned use of local parts as a percentage of the total contracted items
Value of local parts in relation to a bill of materials	Planned monetary value of the local parts utilised in a bill of materials (as a percentage of the total spend)
Value spent on local suppliers	Planned percentage monetary value spend on procurement of goods and services from SA suppliers
Number of local suppliers in the supply chain	Number of South African suppliers that are to be utilised in the fulfilment of a contract

5.3 Technology transfer/sustainability

Technology improvements are intangible assets with significant economic value. The Service Provider will be measured on its plan to transfer knowledge and IP to contribute towards capability building of the local supply base, which ultimately leads to improved efficiency and capability. Plans to assist in this by a Service Provider must be assessed to enable the local supply base to potentially export its newly-acquired technological know-how, thereby decreasing capital leakage.

Criteria	Description
Technology transfer including: <ul style="list-style-type: none"> ➤ Methods of manufacturing ➤ Introduction of new technologies ➤ IP transfer (number and value) 	<ul style="list-style-type: none"> ➤ Introduction of a new/improved method of manufacturing ➤ Provision of new technologies: <ul style="list-style-type: none"> ○ For processes ○ ICT ➤ The provision of patents, trademarks and copyrights
Number of local suppliers to be evaluated for integration into the OEM supply chain	An indication of the number of South African suppliers that an OEM/Service Provider plans to evaluate for possible inclusion into its supply chain, should it meet the requirements

5.4 Skills development

Indicates the company's commitment to education and whether that fits in with targeted groups (artisans, technicians, etc.). Consideration needs to be directed towards the adequate quality and value of skills so developed in order to allow for better evaluation in line with Government's objectives.

Criteria	Description
Number of downstream supply chain individuals to be trained including: <ul style="list-style-type: none"> • Number of artisans trained • Number of technicians trained • Number of black people trained • Total number of people trained 	Number of individuals that the Service Provider plans to train in the local industry over the contract period; training undertaken in the previous year will be taken into account
Number of company employees to be trained	Number of individuals within the company (in South Africa) that the Service Provider plans to train over the contract period; training undertaken in the previous year will not be taken into account as past employee training appears in the skills development pillar of the B-BBEE scorecard; criteria broken down as for industry training above
Certified training (yes/ no)	Compliance with local and/or international skills accreditation
Rand value spent on training	Total planned monetary value spend (as a % of contract value) on skills development/training for the contract period within the industry; money

Criteria	Description
	spent in the previous year will be included in year 1 to make allowance for Service Providers who have just completed a training drive within the industry
Number of bursaries/ scholarships (specify field of study)	The number of higher education bursaries/scholarships provided in the previous year and planned for the length of the contract
Number of apprentices (sector must be specified)	The number of apprentices that the Service Provider plans to enlist during the course of the contract
Investment in Schools in specific sectors e.g. engineering	The monetary value that the Service Provider is prepared to invest in the development and running of schools to increase technical skills development

5.5 Job creation/preservation

Job creation / preservation allow assessment of Government's objectives to increase labour absorption, focusing on unskilled workers and Black youth.

Criteria	Description
Number of jobs preserved	<i>Number</i> of jobs which would be preserved through Award of Contract
Number of jobs created including:	Number of jobs to be created during the period of the contract
<ul style="list-style-type: none"> ➤ New skilled jobs created 	<ul style="list-style-type: none"> ➤ Jobs for people in a specialised field of work requiring a defined training path and / or requisite level of experience in order for them to perform that role. These people could be in possession of a certificate, diploma or degree from a higher education institution
<ul style="list-style-type: none"> ➤ New unskilled jobs created 	<ul style="list-style-type: none"> ➤ Jobs for people where the field of work does not require extensive formal training or from whom no minimum level of education is required
<ul style="list-style-type: none"> ➤ Number of jobs created for youth 	<ul style="list-style-type: none"> ➤ Jobs created for individuals aged 16 – 30 years
<ul style="list-style-type: none"> ➤ Number of jobs created for Black youth 	<ul style="list-style-type: none"> ➤ Jobs created for Black individuals aged 16 – 30 years

5.6 Small business promotion

These criteria give an indication of the Service Provider's commitment to developing small business in line with NGP and B-BBEE requirements.

Criteria	Description
Percentage procurement from: <ul style="list-style-type: none"> • QSEs • EMEs • Start-ups 	Refers to the planned procurement from small business as a % of the total planned procurement spend

Criteria	Description
Non-financial support provided to small business	Service Providers will be credited for each non-financial ED support that they are planning to give to small business e.g. Professional support; employee time allocated to assisting small business
Financial support provided to small business	Service Providers will be credited for each financial ED support initiative that they are planning to undertake during the contract period e.g. Shorter payment terms; interest free loans
Joint ED initiatives with Transnet	The number of ED initiatives that the Service Provider will jointly run with Transnet: <ul style="list-style-type: none"> • That are aligned to Transnet's objectives • That are non-financial in nature

5.7 Rural development/integration

The Service Provider's planned use of local labour and business will contribute to Governments NGP objectives and result in supply chain efficiencies. Commitment to rural development will result in the alleviation of poverty and thereby contribute to development objectives. The development must be sustainable in order to have a long-term and meaningful impact.

Criteria	Description
Number of local employees	Number of people employed from within the town/city of operation
Value spent on local business	Monetary value spent on businesses within the town/city of operation
Proximity of business to operations	The locality of the business in relation to operations, preference is given for regional (provincial) locality
Number of rural businesses to be developed	The number of rural businesses that the Service Provider plans to develop as a result of the contract
Value of development to local community (sustainable)	The monetary value spent on rural community development that will result in long-term social improvements

6 Market Intelligence Assistance

Service Providers with limited knowledge of the local market, supply base and its capabilities may require assistance in identifying local suppliers and the development needs in order to develop its SD Bid Document. The United Nations Industrial Development Organisation (UNIDO) supplies a benchmarking service in South Africa which will be able to assist Service Providers in identifying potential local suppliers with which to work. In addition, this service will provide insight as to the type of support that these local suppliers require in order to become more competitive. UNIDO's benchmarking tool gives insight into the performance levels being seen in Service Providers' businesses and the practices used to deliver the products or services being offered. The benchmarking tool focuses on:

- 6.1 Performance data relating to -
 - a) Financial performance

- b) Customer data
- c) Processes
- d) Learning & growth

6.2 Company's current business situation -

- a) Plans for the business and capabilities to manage their fulfilment
- b) Ability to generate business
- c) Employee relationships
- d) Developing new markets
- e) Developing products and services
- f) Managing money

The UNIDO benchmarking tool provides a basic framework through which an understanding of the South African market can be established. Whilst the list of criteria may not be exhaustive, Service Providers are free to meet with UNIDO to further understand how they can work together to develop a deeper understanding of the market and the SD opportunities available.

7 Government Policy Documents

- NIPP http://www.thedti.gov.za/industrial_development/nipp.jsp
- IPAP2 <http://www.thedti.gov.za/DownloadFileAction?id=561>
- CSDP <http://www.dpe.gov.za/res/transnetCSDP1.pdf>
- NGP <http://www.thepresidency.gov.za/pebble.asp?relid=2323>

8 Other Reference Websites

References	Website
Department of Public Enterprise (DPE)	www.dpe.gov.za
United Nations Industrial Development Organisation (UNIDO)	www.unido.org/spx

GLOSSARY OF WORDS

Broad-Based Black Economic Empowerment (B-BBEE)

A South African legal requirement that require all entities operating in the South African economy to contribute to empowerment and transformation

Enterprise Development (ED)

An element contained within the B-BBEE scorecard whereby a Measured Entity can receive recognition for any Qualifying Enterprise Development Contributions towards Exempted Micro-Enterprises or Qualifying Small Enterprises which are 50% black owned or 30% black woman owned. Enterprise Development Contributions consists of monetary and non-monetary, recoverable and non-recoverable contributions actually initiated in favour of a beneficiary entity by a measured entity with the specific objective of assisting or accelerating the development, sustainability and ultimate financial independence of the beneficiary. This is commonly accomplished through the expansion of a beneficiaries financial and/ or operation capacity.

Industrial Policy Action Plan II (IPAPII)

The implementation plan for the National Industrial Policy Framework (NIPF) which details key action plans (KAPs) and timeframes for the implementation of industrial policy actions in line with the NIPF.

Integrated Supply Chain Management (iSCM)

Refers to an integrated "one supply chain management" strategy within Transnet which has been developed with Centres of Excellence (COEs) with cross-functional teams comprising divisional and corporate task team members, to deliver value through improved efficiencies and compliance with the regulatory environment.

New Growth Path (NGP)

Developed by the Economic Development Department tabled in January 2010 frames a new approach to unlocking economic growth by knitting together the IPAP2 as well as policies and programmes in rural development, agriculture and, sciences & technology, education, skills development, labour, mining and beneficiation, tourism and social development with the aim to target limited capital and capacity at activities that maximise the creation of decent work opportunities. Key indicators include: Quality job creation, Youth employment, Labour intensive growth, and Equity.

Original Equipment Manufacturer (OEM)

Refers to a manufacturing company that owns the intellectual property rights and patents for the equipment it sells and services

Socio-economic Development

Refers to development which addresses social and economic aspects such as job creation, poverty reduction and increased national value add and which not only focuses on the business's financial bottom line.

State Owned Enterprise (SOE)

Refers to Government-owned corporations. They are legal entities created, and owned, by Government to undertake commercial activities on behalf of an owner Government, and are usually considered to be an element or part of the state. They are established to operate on a commercial basis.

Supplier Development (SD)

Improving the socio-economic environment by creating competitive local suppliers via Enterprise Development, CSDP and other initiatives such as Preferential Procurement. This results in a supply base that can eventually be competitive to market its goods on the international market leading to increased exports.

United Nations Industrial Development Organisation (UNIDO)

A specialised agency of the United Nations. Its mandate is to promote and accelerate sustainable industrial development in developing countries and economies in transition, and work towards improving living conditions in the world's poorest countries by drawing on its combined global resources and expertise.

Local Content

The portion of the tender price which is not included into the imported content provided that the local manufacture does take place.

Imported Content

The Portion of the tender price represented by the cost of components, parts or materials which has been or are still to be imported (whether by a supplier or its subcontractor) and which costs are abroad, plus freight and other direct importation costs, such as landing costs, doc dues, imported duty, sales duty or other similar tax or duty at the South African port of entry.