
IFPA (Installation and Fabrication Pipes Association) Consulting Engineer's Contract Document

This document is intended for use by Consulting Engineer in compiling their RFQ and Contract Documentation for works that include the welding of thermoplastic systems.

IFPA Membership

Preference shall be given to IFPA Member Companies in good standing. Welders employed by IFPA Member Companies are issued with welders' certificates and a unique weld identity stamp that provides traceability for each weld. All weld protocols are recorded and shall be made available to ensure quality welds.

Contractors' requirements

All Contractors shall comply to all product and welding standards as set out in the IFPA Code of conduct and minimum audit requirements.

Copies of such documents can be obtained from IFPA and all current IFPA members.

The welding equipment and processes shall comply with the applicable SANS (South African National Standard) for the welding operation as follows:

- The SANS 1671 "series" of standards specifies the requirements for conformance of machines and equipment.
- The SANS 10268 "series" of standards specifies the requirements for conformance of welding processes.
- SANS 10270 Welding of thermoplastics – Approval of welding procedures and welds.

IFPA Members shall have copies of all the applicable Standards and the relevant product standards and have a full understanding of the content and implementation thereof.

Approval

Before work commences the contractor shall be required to obtain approval by conforming to the following:

- SANS 10269 Welding of thermoplastics – Testing and approval of welders
- SANS 10269 Plastics welder Test Piece Certificate
- SANS 10270 Welding of thermoplastics – Approval of welding procedures and welds.

The process of each approval is witnessed by an independent qualified welding inspector (Plastics SA Certificate of Competence "Thermoplastic Welding Inspection" or similar certificate from an accredited institution) who documents conformance on completion, records the approval and certificates it.

Supporting approval documentation

Non-destructive visual assessment of the weld shall be conducted in accordance with the following:

- SANS 10268-10 Welding of thermoplastics – Welding processes Part 10: Weld defects.

Destructive testing of the weld shall be conducted in accordance with the following:
Weld Qualification (Competence)

- SANS 6269 Welding of thermoplastics – Test methods for welded joints.

System weld (performance)

- Pipe System standard
- System designed weld factor.

QC/QA on site

Compliance of all components to the specified standard and contract requirements will be validated and recorded.

Confirm that material supplier is a valid SAPPMA member www.SAPPMA.co.za

Confirm that the fabricator and welder contractor is a valid IFPA member www.IFPA.co.za

Confirm that the Testing and Approval certificate of the welder is still valid www.Plasticsinfo.co.za

No welding inline of unmarked non-traceable non-conforming product (Components) shall be done.

During the construction of the works, the “last weld” shall be “cut-out”, on a random basis, from the pipeline for visual inspection and destructive testing at a sampling rate as follows:

- 0 – 250 welds 5%
- 250 – 500 welds 3%
- 500 – 1200 welds 2%
- 1200 – 3200 welds 1%
- 3200 – 10000 welds 0,5%

The contractor shall allow for this sampling rate in their tender and in the construction program for the works.

Designing of a different sampling plan.

Refer to SANS 2859-1 Sampling procedures for inspection by attributes Part 1 and specify your requirements.

SANS 10268 continuous visual inspections and weld protocols recording of each weld during and upon completion.

SANS 10268 & 10270 Recording of process conditions on site as well as all critical process parameters as per the approved welding procedure.

Non-conforming workmanship will be reported and corrected in line with the standards and specific requirement and will be signed off for inclusion in the Welding and Qualification file.