

**PRODUCT STANDARD**
PUMPS

FP 70017

Rev. no. 00

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**MINOR REPAIR OF WELDING 13% Cr 4% Ni 0.5% Mo
CASTING**

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MINOR REPAIRS: Repaire shall be considered minor when the depth of the cavity after preparation is less than 20% of the wall thickness or less than 25mm whichever is the smaller and the extent of the prepared cavity is less than 65mm.

BASE MATERIAL: 13% Cr, 4% Ni, 0.5% Mo, Stainless Steel ASTM 296 Crd. CA6NM.

WELDING PROCESS: Manual Shielded Metal Arc.

FILLER METAL: BS 2926 23.12 R AWS A5.4.16 E309-16.

ELECTRICAL SUPPLY: AC OCV 70 minimum or DC Electrode + VE (DC Preferred).

PREPARATION OF BASE METAL: By machining, chipping or grinding. Excavations shall be such as to allow complete access for efficient welding.

The root radius shall be not less than 5mm and the profile included angle not less than 20°.

The cavity shall be proved clear of defects by Magnetic particle or Liquid Dye Penetrant Examination prior to commencement of welding.

CLEANING: Surfaces for welding shall be degreased by solvent wiping and wire brushed free from any contaminants.

PREHEAT: 100 - 150°C.

INTERPASS TEMPERATURE: 200°C Maximum.

POST WELD HEAT TREATMENT: Not required.

WELDING TECHNIQUE: The stringer bead technique shall be used and each run or pass thoroughly cleaned and wire brushed free from any debris before proceeding with the next subsequent run.

WELD DEFECTS: Porosity, slag inclusions or cracks appearing on the surface of any weld bead shall be rectified by grinding and proved clear by Liquid Dye penetrant or Magnetic Particle Examination before continuing with any further welding.

E OF ELECTRODES: Electrodes shall be stored and used in accordance with process specification FP 7004.

REVISION:

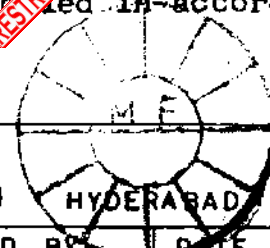
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APPROVED BY DATE

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INSPECTION: Visual inspection during and after completion of the welding operation. Finally, Liquid Dye Penetrant and to class or code of scheduled requirements.

RECOMMENDED PARAMETERS

<u>Electrode dia.</u>	<u>Current Amps</u>
2.5 mm	70-100
3.25mm	90-120
4.0 mm	150-190
5.0 mm	200-240

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