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TRANSMISSION PROJECT
DIVISION

ENGINEERING MANAGEMENT

PROCESS SPECIFICATION

TB-4-221-509-013

REVISION: 00

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SPECIFICATION FOR MS WELDING
(AT SITE)

1.0 THIS SPECIFICATION COVERS THE MS WELDING OF STRIP/ROD AT SITE WHICH IS USUALLY REQUIRED FOR BELOW GROUND EARTHING MAT.

THIS SPECIFICATION IS CONSIDERED AS QUALIFIED PROCESS SPECIFICATION AS THE SAME HAS BEEN IN THE PAST PROJECTS. HOWEVER PROCESS QUALIFICATION SHALL BE DONE IF THE CHANGES ARE MADE BASED ON THE CUSTOMER REQUIRMENT

2.0 PROCESS/MATERIAL SPECIFICATION

- STANDARD AS PER IS 2062-1992 (1)
- WELDING PROCESS MANUAL METAL ARC WELDING/SHIELDED METAL ARC WELDING
- PARENT MEUL MS BLACK ROD/STRIP/GI STRIP
- JOINT DESIGN AS ILLUSTRATED BY SKETCHES IN ENCLOSED ANNEXURE
- FILLET METAL VORTIC (OR) VORDLAN OF ESAB (1) LTD.
(OR)
OVERCORD-S OF ADVANCED OERLIKON LTD.
(OR)
EQUIVALENT
- SIZE OF FILLER METAL : 4 mm
- PREHEATING AND POST WELD HEAT TREATMENT NOT REQUIRED

APPROVED SUBJECT TO NIT
COMMENTS CONTAINED IN THIS
LETTER No. 141
Date 29-07-04
MANAGER (TND)
TURKEY PROJECT

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REVISION NO.	01	02	03	PREPARED	CHECKED			
DATE	17.1.96	4.3.96	24.7.01	DKM	SN			MR
REVISION NO.				Dt. of first Issue				APPROVED
DATE				31.8.94				HEAD TBEM



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TYPE OF CURRENT AND RANGE : AC, 100-170 A, 40-50 V, 1PHASE,
THROUGH WELDING TRANSFORMER

3.0 PROCEDURE

3.1 CLEANING THE JOINT:

THE JOINTS TO BE WELDED SHALL BE CLEANED USING WIRE BRUSH AND WIPED CLEAN WITH CLEAN & DRY CLOTH.

3.2 THE JOINTS SHALL BE ARRANGED WITH OVER LAPPING AS ILLUSTRATED IN THE ENCLOSED SKETCHES

3.3 WELDING: (MS BLACK ROD OR STRIP)

3.3.1 WEAVE BEAD FOR THE ROOT RUN AS WELL AS SUBSEQUENT PASSES SHALL BE EMPLOYED.

3.3.2 THE ROOT RUN SHOULD BE CHECKED FOR CRACKS USING A MAGNIFYING GLASS. CRACKS IF NOTICED MAY BE REMOVED BY GRINDING AND RE-WELDING. WELD SLAG SHOULD BE REMOVED BEFORE STARTING THE SUBSEQUENT RUN.

3.3.3 AFTER COMPLETING THE WELDING OF JOINT, IT SHOULD BE ALLOWED TO COOL NATURALLY AND THEN CLEANED. AFTER CLEANING, FIRST ONE COAT OF PRIMER (RED OXIDE) AND THEN TWO COATS OF BLACK BITUMEN PAINT SHALL BE APPLIED TO PREVENT CORROSION.

3.4 WELDING: (GI STRIP-ABOVE GROUND)

3.4.1 PROCEDURE SHALL BE SAME AS GIVEN ABOVE AT 3.3.1 AND 3.3.2 FOR MS BLACK ROD OR STRIP.

3.4.2 AFTER COMPLETING THE WELDING OF JOINT IT SHOULD BE ALLOWED TO COOL NATURALLY AND THEN CLEANED. AFTER CLEANING, FIRST ONE COAT OF PRIMER (RED OXIDE) AND THEN TWO COATS OF ZINE RICH PAINT SHALL BE APPLIED TO THE WELD PORTION TO COVER IT UNIFORMLY AND ADEQUATELY TO PREVENT CORROSION.

4.0 PREQUALIFICATION OF WELDERS

THIS SHALL BE CARRIED OUT AS PER SYSTEM NO." TBSM 417"

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APPROVED BY
 COMMENTS ON THIS DOCUMENT
 BY LETTER No. 16
 DATE 29-07-04
 MANAGER (TECH)
 TURKEY PROJECT
 BHARAT HEAVY ELECTRICALS LIMITED



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ENGINEERING MANAGEMENT

PROCESS SPECIFICATION

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5.0 REFERENCES

- (1) IS:2062-1992
-STEEL FOR GENERAL STRUCTURAL PURPOSES. ✓
- (2) SECTION DX OF AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME), (1992) ✓

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APPROVED SUBJECT TO NIT
AND INCORPORATION OF
REVISIONS CONTAINED IN THIS
LETTER NO. 141.....
TKP F..6.....
29-07-04.....
M. NARAYAN (TECH)
FOR NIT PROJECT

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TRANSMISSION PROJECT
DIVISION

ENGINEERING MANAGEMENT

PROCESS SPECIFICATION

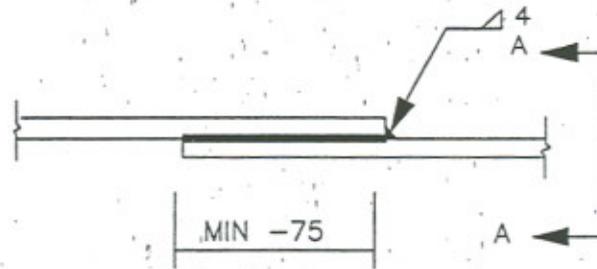
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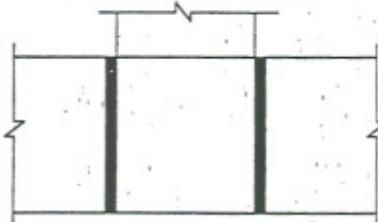
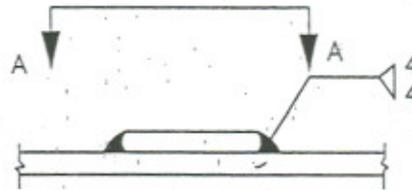
C. STRIP TO STRIP

1. STRAIGHT LAP JOINT/RISER



VIEW-A-A

2. CROSS LAP JOINT



VIEW A-A

NOTE :- ALL DIMENSIONS ARE IN MM.

APPROVED BY: [Signature]
 AND INCORPORATED [Signature]
 COMMENTS CONTAINED IN THIS
 CHANGE LETTER No. 141
 Date: 29.07.04
 (MANAGER TECH)
 TURNKEY PROJECT

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