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REVISION 0	REFERENCE EEAM-Q-019	
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DOCUMENT TYPE SPECIFICATION	AUTHORISATION DATE: Date signed by CEO
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TITLE: SPECIFICATION FOR CABLE REEL SYSTEMS	PAGE 0 of 4
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FUTURE REVISION RECORD NUMBER	DESCRIPTION OF REVISION	APPROVAL	DATE 01/04/2003
-1-			

CONTENTS		Page
1.0	SCOPE	03
2.0	CABLE REELING DRUMS	03
3.0	TRAILING CABLES	04
4.0	CENTRE FEED PITS	04
5.0	GENERAL	04

CABLE REEL SYSTEMS

SPECIFICATION HE8/2/7 [Version 6]

March 1997

1. SCOPE

- 1.1. This specification covers TPT's requirements for medium and low voltage trailing cables and motorised cable reeling drums and must be read in conjunction with the main specification.

2. CABLE REELING DRUMS

- 2.1. Electromagnetic or permanent magnet type couplings are preferred, such that automatic torque compensation is provided for constant cable tension.
- 2.2. Mono-spiral drums must be of bolted sections. All drums shall be manufactured from 3CR12 steel or stainless steel and shall be painted according to Portnet Specification HE9/2/8.
- 2.3. The rotating speed of the cable reel must be co-ordinated with the motion related to it to ensure the correct cable tension at all times.
 - 2.3.1. Cable tension protection devices or systems shall be provided to trip out the associated motion should the recommended cable tension be exceeded. In addition a slack cable device must be incorporated to trip out the associated motion should there be excessive slack cable.
- 2.4. Limit switches shall be provided to automatically slow down and stop the associated motion before the last two turns are unwound from the drum.
- 2.5. The cable reeling drum installation shall be complete with all cables, sleeves, rollers, guides etc.
- 2.6. All brush gear shall be individually removable without having to remove other gear. Separate brush gear connection bolts shall be provided.
- 2.7. Sliprings housed in the drum body will not be acceptable.
- 2.8. The Sliprings shall be fully protected against weather, water and dust, with anti-condensation heating in the slipring compartment.

- 2.9. The sliprings shall be readily accessible for convenient maintenance and shall be provided with easily removable covers. They shall be of ample current carrying capacity and shall be constructed of corrosion resistant material throughout, all sliprings being of brass. The insulation shall be specifically designed to avoid "tracking" due to the deposition of saline moisture.

NOTE: When the covers are removed all sliprings and brushes must be exposed for visual examination and access from all sides. Covers of the split type will not be accepted.

- 2.10. Slipring enclosures shall be manufactured in 3CR12 or stainless steel and shall be painted according to Portnet specification HE9/2/8.
- 2.11. Provisions shall be made to relieve the slipring connecting studs of the weight of the cables.
- 2.12. An extra collector point and brass slipring of ample capacity shall be provided for efficient earthing.
- 2.13. The power collector gear shall be capable of withstanding a short circuit fault capacity as stated in the main Specification.

3. TRAILING CABLE

- 3.1. Adequate lengths of flexible trailing cable in compliance with the following Specifications or equivalent shall be supplied: VDE 0250 (Construction), VDE 0768 (Bending Radii), VDE 0100 (Current Carrying Capacity).
- 3.2. The cable shall be capable of withstanding a short circuit capacity as stated in the main Specification.
- 3.3. Power cables with integrated control cables will be preferred where control signals are required onto or off the equipment.
 - 3.3.1. An alternative offer may be submitted for power cables with optical fibre cores for control purposes. Prove of use of these cables as well as for reliability must be supplied with the tender.

4. CENTRE FEED PITS

- 4.1. Centre feed pits shall be equipped with suitably designed cable horns and drums, manufactured in stainless steel. At least two turns of the trailing cable shall be wound on the drum portion of the cable horn.
- 4.2. Connection boxes in the centre feed pits shall be of robust construction, made of stainless steel, with IP65 enclosures, and suitably rated for the voltage concerned.

- 4.2.1. Connection boxes for power cables shall preferably be similar or equal to "Martco" and for control cables connection boxes similar or equal to "Controp Esaco" type, sized so as to accept at least the same amount of double terminals as the amount of cores.
- 4.2.2. Cable connections of medium and high voltage cables shall be encapsulated in a gel similar or equal to "Fasa Semisol". Hot cured resin encapsulation is not acceptable.
- 4.2.3. Alternatively cable joints shall be in line splice type joints if called for in the main Specification.

5. GENERAL

- 5.1. All equipment shall be suitably designed such that the minimum bending radius of the specific cable used, is not reduced below that recommended by the manufacturer.
- 5.2. All equipment are to be as maintenance free as possible.
- 5.3. All cables and equipment shall be sufficiently protected against mechanical damage where necessary.

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END OF SPECIFICATION HE8/2/7 [Version 6]

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