1.3.9.7 Submersible Motor Cables

A. Submersible motors shall be complete with lengths of flexible cable for Power, Signalling and Protection purposes.

B. Each cable shall be a minimum of 8 metres long or as otherwise required by the Contract, and shall be rated in accordance with the cable routing details. Cables shall be continuously rated to carry the motor full load current when laid in a classified area to the approval of ADDC. The cable shall be 3 cores only and factory fitted according to the connection of the motor winding and type of starting method.

C. Flexible cables for use in potentially explosive atmospheres shall be identical to those types used to obtain the potentially explosive hazardous area combined motor/cable certification. Where protection cables are part of an intrinsically safe circuit the outer sheath shall be coloured blue.

D. Jointing of cables is not acceptable.

1.3.9.8 Bearings

A. The motors shall run in ball and/or roller bearings and the weight of the motor shall be carried by thrust bearings incorporated in the motor body.

B. Maximum life bearings with oil seals shall be fitted to both drive end and non-drive end bearing housings to prevent ingress of solid particles and liquids. Bearings shall be in accordance with BS 292 or equivalent.

C. Bearings shall be grease lubricated and shall be fitted with a means for replenishing the grease and a relief device for disposal of excess grease. Hydraulic button head grease nipples in accordance with BS 1486 Part 2 or equivalent shall be provided and shall be extended, where necessary, such that they are located at the top of the frame. Re-greasing points shall be located for ease of access.

D. Bearing temperature monitoring facilities shall be provided on submersible motors over 100kW and on non-submersible motors over 250kW.

E. “Sealed for Life” bearings shall not be used except for small motors.

F. Where required, large machines shall be provided with insulated bearings to prevent bearing failure due to circulating rotor currents.