C. Fabricated fittings are subject to pressure de-rating factor as in ISO 4427-3.

D. Where PE100 pipes connect to other materials or flanged fittings either stub flanges with encapsulated backing rings or restrained transition fittings shall be used. Stub flange backing rings shall be stainless steel 316. Stub flanges that will be buried shall be encapsulated with fusion bonded epoxy. They shall be drilled in accordance with ISO 7005-2, PN 16 and have dimensions in accordance with ISO 9624, PN16 unless otherwise specified.

E. Fabricated fittings shall be designed and manufactured in accordance with the requirements of ISO 4427, Part 3, in particular Annex B. The pressure derating factors to be employed by the fittings fabricator shall be in accordance with annex sections B3 and B5 unless they can demonstrate that higher factors can be applied. The use of any higher factors shall be approved by the Engineer prior to commencement of fitting fabrication considering agreed design temperature of and selected reduction factor.

F. All compression fittings shall be certified by an independent third party as being fully compliant with the requirements of ISO 14236. They shall be tested and certified as being class 1 end load bearing fittings i.e. they shall prevent the pull out of the pipe at their rated operational pressure. Only materials listed in Tables 1 and 2 of ISO 14236 shall be used in the manufacture of the fitting body.

G. Any bolts, studs, nuts or washers shall be of stainless steel (grade 316).

H. Backing rings shall be in accordance with BS EN 1092-1 standards.

I. Electro-fusion fittings shall be injection molded fittings made of PE100 but incorporating integral heating element(s) to enable fusion jointing with PE100 pipes and shall be in accordance with ASTM F1055 and ASTM D3550 standards.

J. Materials and constituent elements used in making the fitting (including elastomers, greases and any metal part) shall be resistant to the internal and external environment same as the piping system and shall have life expectancy (during storage, operating conditions, environment etc.) at least equal to pipe system (i.e. 50 years). The requirements for the level of material performance for non-polyethylene parts shall be at least as stringent as that of the PE pipe systems.