

**Asset Management Directorate
Guidelines
For The Design Of Water
Distribution Networks In
Al Ain Region**

GL.AM.01

Effective Date : 11 / 12 /2014

Guideline#: GL.AM.01

Issue : 1

Revision : 0

Page 20 of 38

Approved by:

Managing Director

The coating for DI pipes, DI fittings and valves shall be as per ADWEA standard specifications. The table below summarize ADWEA standard specifications for coating of DI pipes and fittings.

The DI and HDPE shall be generally connected by stub flanges.

The designer shall specify the test pressure at site which shall not exceed the PEA pressure of the selected pipe material and shall specify in details the site testing procedure including the test acceptance criteria for the different types of pipelines that used in the project.

Table 7: Internal and external coating to ductile iron Pipes and Fittings

No.	DI Pipes and Fittings	Internal and external coating
1	Internal coating (pipes and socket fittings)	Sulphate resisting cement mortar lining.
2	Internal / External coating (Fittings at chambers and flanged fittings)	Fusion bonded epoxy coating of DFT minimum 300 microns
3	Internal socket ends of pipe	-Zinc rich paint plus a layer of non-toxic bituminous paint OR - Epoxy coating (in case of external coating of polyurethane).
4	External Protection (Pipes)	Metallic zinc coating covered with a bituminous varnish coat OR Solvent free polyurethane.
5	External spigot ends of pipes	Metallic zinc plus layer of non-toxic bituminous paint OR Epoxy coating (in case of external polyurethane coating)
6	Flanges (Flanged branches of buried socket fittings)	Zinc rich paint with bituminous coating OR Epoxy coating for polyurethane coated pipes.
7	External Protection of Socketed Fittings	Zinc rich paint, plus layer of non-toxic bituminous paint OR Solvent free polyurethane min.
8	Additional external protection on site	-Black polyethylene sleeve (250 microns). -Heat shrinkable collars for all the joints (in case of external coating f polyurethane)

When ADWEA specification or the design guideline specify more than one option for the design criteria (i.e. coating for pipes) , the designer shall select the optimum option for the considered project and shall justify technically and financially the selected option. Moreover the selected option shall be defined clearly in the tender document (i.e. in Technical Data Sheets, Bill of Quantities, etc...)