working time, cleaning time, alarms etc. Moreover, signals for controlling external equipment such as sludge pump, polymer unit etc.

All driving drums shall be coated by industrial rubber. Belt speed shall be 3 - 10 m/minute and equipped with cleaning brushes, which are capable of uninterruptible washing, and removable spraying nozzles. Effluent water from belt thickener shall be re-used for cleaning of nozzles by wash water pump after filtration. Nozzles are able to be cleaned by rotating brush or self-cleaning nozzles are also acceptable. Belt motor shall be controlled by frequency convertor.

In order to able to use effluent water from belt thickener for back wash all necessary equipments for each thickener such as pumps, valves, fittings, pipework, level sensor, etc. shall be provided.

The combined pre dewatering unit and final dewatering lines is subject to a Test after Completion to verify the performance. See separate test in Volume III section 4.

Electrical panel of equipment shall be provided as stainless steel and IP65.

7.8.42.2 Drum Thickeners

Required DS in sludge out: minimum 6%

The drum thickener shall work on the principle of conveying polyelectrolyte treated (flocculated) sludge through a slowly rotating drum filter. The sludge shall remain in the drum, while the water phase passes through the filter cloth.

The rotating filter cloth shall be made of flexible polyester.

The drum thickener shall be equipped with a drum cleaning system consisting of a spray bar for water. Water consumption shall be minimised by intermittent cleaning of the drum using potable water.

The configuration of the filter cloth shall be in such a way that a filter cloth element with smaller mesh size (0,6 mm) shall be mounted on the first (inlet) section of the drum and a filter cloth element with larger mesh (1 mm) size shall be mounted on the following (outlet) section of the drum with large openings.

The drum thickener shall be totally enclosed.

Sludge concentration should be optimised by varying the feed rate, the polymer type and dosage, flocculation mixer speed, drum speed, angle of the drum and the spraying interval.

The bearings shall have an anticipated life of over 10,000 hours.

Materials:

Cover:	Fiberglas or stainless steel
Housing:	EN 1.4404 or higher
Drum:	EN 1.4404 or higher
Base Frame:	EN 1.4306 or higher
Cloth:	Polyester
Flocculation Reactor:	EN 1.4404 or higher