The bridge shall be designed to carry a uniform load of 1.5 kN/$m^2$ in addition to dead weight and operational loads. The Contractor shall design the bridge for the actual point-load adequate for the equipment to be unloaded, however, no less than 3.0 kN in the middle of the span.

The maximum allowable deflection at the above design loads is 1/500 (Acc. To DIN-EN 19569) of the span. Limitations of the load bearing capacity of bridge shall be indicated on a distinct sign mounted at the entrance to the bridge.

The width of the bridge shall not be less than 800 mm. The height of the handrails shall be minimum 1000 mm. All open mesh floor sections forming the walkway of the bridge shall be properly secured against skidding by means of special brackets. The bridge shall be furnished with toe plates.

The centre bearing shall be adequately rated for continuously operation under the maximum design load.

Lubrication points for the centre bearing shall be easily accessible without the necessity of dismantling any floor sections.

The centre bearing shall be fitted with an arrangement of slip rings with adequate amount of slip contacts rated for 16 Amperes to provide all motors etc. with power plus one contact for earthing. A set of surplus 3 (three) slip contacts for spare purpose shall be included. The arrangement shall be safely internal fitted in a protective capsulation. The arrangement shall be well constructed by design and chose of materials to prevent corrosion, condense and development of ice that can disturb the operation.

The bottom scraper shall span over the entire tank radius, and be designed for effectively collection and transport of settled sludge to the sludge pit in the centre of the tank. The bottom scraper shall be provided with a sufficient number of wheels and fit perfectly to the bottom of the tank.

The surface scraper shall ensure collection and transport of floating sludge via screw conveyer system, chain track system or any other system which can remove floating materials to scum well located at deflector by force. The surface scraper shall span over the entire tank radius and be designed to convey the floating sludge towards the periphery of the tank.

A geared motor of recognized make shall drive the rotary brush. The brush shall be adjustable and lockable in desired positions during operation. The mechanism shall be made of stainless steel EN 1.4404 (AISI 316L). Springs and pulleys shall be made of stainless steel EN 1.4404 (AISI 316L).

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

### 7.8.34 Longitudinal Travelling Scraper Bridges

Longitudinal scrapers are used in primary or secondary sedimentation tanks with a rectangular design for sludge removal. This equipment scrapes the sludge longitudinally and transfers it to the sludge collection hopper at the end of the tank. At the same time, the surface skimming blade carry the foam to the discharge point at the opposite side.
Travelling bridges for primary or secondary sedimentation tanks shall be complete units consisting of a bridge with surface skimming blade for the collection and removal of scum/foam from the surface of the sedimentation tank.

The travelling bridge shall be controlled from a local panel installed on the bridge. The bridge and the lifting mechanism of the bottom scrapers and the skimming blade shall operate automatically, however it shall be possible to operate the bridge and lifting mechanism of the bottom scrapers and the skim-