MUCKING EJECTORS E1500 SERIES

XPRIMETECH





- Mucking Ejectors are water-driven jet pumps and are used as vacuum cleaners for cleaning the onboard cement tanks PSV's (Platform Supply Vessels) or AHTS's (Anchor Handling Tug Supply Vessels).
- Cleaning is always an important aspect in any industry especially shipping industry carrying dry powders such as cements.
- Extensive maintanance and cleaning procedures are followed while carrying dry powders especially cements as the hygiene of the crew has to be maintained as well as to reduce the cleaning costs.
- Clean conditions have to be maintained during the various phases of loading and unloading of cement cargos and those phases are :
 - (i) Prior to loading Cleaning up of intended storage area
 - (ii) During Loading Dust Evacuation
 - (iii) After Discharging Cleaning & de-dusting the deck or storage area
- Generally, in marine industries Water driven mucking ejectors are employed for performing the above cleaning phases.

PRINCIPLE OF OPERATION

- **Mucking ejectors** consists of **converging-diverging venturi** in which vacuum is created by the flow of a high pressure fluid which is called the **Motive fluid** of the ejector.
- Motive fluid is characterised as a high pressure fluid enters a **Multi-Nozzle** opening.
- The high pressure motive fluid gets converted into a jet when it exits the nozzle. According to the Principle of Conservation of energy, one form of energy (Pressure energy in this case) gets converted to other form of enegy (Velocity energy in this case).
- As a result of the formation of jet, vacuum is created which pulls the fluid that has to be entrained.
 The fluid to be entrained is called the **Suction fluid** of the ejector.
- A Multi-nozzle opening is used in order to enhance the air handling capacity of the ejector.
- This action produces an effect similar to a vacuum cleaner and as a result cement and other dust particles are sucked into the flowing stream of water.
- At the suction side of the ejector, a ball valve is connected. It is important to shut off the ball valve before shutting off the ejector to prevent the back flow of the motive water.
- Similarly, a strainer is fitted in the motive driving side to prevent the entry of any unwanted / foreign particles which might hinder the flow of driving motive water.

APPLICATIONS

Mucking Ejectors find applications in all maritime industries.

It helps in maintaining the hygiene and cleanliness of the carrier ships.

ADVANTAGES

No moving parts	Simple & reliable	
Easy to install	• Safe	
Self Priming	Low Cost	
MATERIAL OF CONSTRUCTION		

We offer mucking ejectors that resist corrosion and taking this into consideration we offer the following materials for different parts of the ejector:

Nozzle : SS316

Body & Diffuser : Ni-Al-Bronze

Strainer : SS316

Ball Valve : Brass

PERFORMANCE DATA TABLE

MOTIVE PRESSURE (bar)	MOTIVE FLOW (m³/hr)	DISCHARGE PRESSURE (Kg/cm ² (g))	SUCTION HEAD (MWC below atm)	AIR SUCTION FLOW (m ³ /hr)
5	5 95	0.5	0	357
		1	286	
		2	240	
		3	194	
		4	158	
		5	117	
		6	92	
		7	66	
		8	46	

END CONNECTIONS

Flanged to ANSI B16.5 150# as a standard. We can also provide other standards and end connections as required.

