1.2 GENERAL DESCRIPTION

The Hymac decker is a type of stock thickener used where high volumes and moderate consistency changes are required. It consists of a perforated stainless steel cylinder covered with a wire mesh, rotating in a rectangular stainless steel vat. As the cylinder rotates, the liquid passes through the wire due to the differential head between the stock level in the vat and the white water level inside the cylinder forming a mat on the wire. This mat is picked off by a rubber covered couch roll and sliced off by a doctor blade running the length of the roll. The thickened stock so removed is lifted over the doctor blade and falls from the apron into the discharge chute or the next stage whichever is applicable.

A shower is provided for continuous cleaning of the face wire.

The white water drains through the cylinder mould and exits at one end of the vat.

Hymac deckers are designated by the diameter and face length of cylinder mould.

Example:	78"	X	22 ft.
	diameter of cylinder mould		face length of cylinder mould

Drawings are supplied for every decker in addition to this manual. General assembly and other sub-assembly drawings are always provided. Drive assemblies, layouts and auxiliary equipment drawings are provided as necessary.

These drawings should be consulted when reading this manual.

1.3 CONSTRUCTION

Material: All parts in contact with stock are in stainless steel.

Vat: The fabricated vat is made of stainless steel plate reinforced with mild steel. Each end frame consists of a stainless steel plate on the inside and a mild steel plate on the outside, separated by mild steel hollow structural tubes. Deckle rings made from stainless steel are welded to the inside of the end frames, and formed to the correct diameter for the deckle strap. The white water discharge outlet located at one end is fabricated from stainless steel pipe with a mild steel backing flange. Two stainless steel drains are provided in the vat bottom and one D.P. cell connection is provided in one end frame.

Cylinder mould: This is a stainless steel perforated drum type mould. Perforated plates (deck plates) are supported by a series of intermediate spiders and two end spiders welded to a thick walled pipe core. Each end of the pipe core is fitted with fabricated stub shafts which are stress relieved prior to final assembly with the pipe core. The pipe core is cladded with stainless steel on the wetted side. Clamping rings in stainless steel are provided on the end spiders to secure the wire mesh. Concentric stainless steel deckle rings are welded to the end spiders to provide the seal between the washer vat and the inside of the cylinder mould.

Couch roll: This is a design consisting of a central pipe core. Each end of the pipe core is fitted with fabricated stub shafts. The pipe core is covered with a synthetic cover (Hycor, Nitrile, or Neoprene) specially designed for trouble free service and ground to the correct diameter.

1.3 CONSTRUCTION

Doctor blade: The doctor blade is made of UHMWPE or an equivalent material. It is fastened to a stainless steel triangle fitted with journals and supported by eccentric pins or pillow blocks fitted to the couch mount. The adjustment of the doctor blade is achieved by rotating eccentric pins, or shimming the pillow blocks.

Bearings and sealing: The bearings are grease lubricated spherical roller bearings. The shaft sealing is a stuffing box, packing and bronze gland follower arrangement.

Motor drive: The decker is delivered with a low speed gear coupling, parallel shaft or worm gear reducer, top motor mount, V-belts, sheaves and guards. The motor is usually supplied by the customer.

1.4 SPECIAL FEATURES

a) Removable shaft sleeve c/w "O" ring seals.

b) Same size bearings on both ends of the decker.

c) Double deckle arrangement which allows the cylinder mould to be installed in both left and right hand vats, except for the 48" Dia. units.