DATA SHEET DS1700
EFFECTIVE | JAN. 93
REPLACES | NEW

Hooper™ Gravity Thickener

Efficient pulp stock thickening, washing, and fines control.

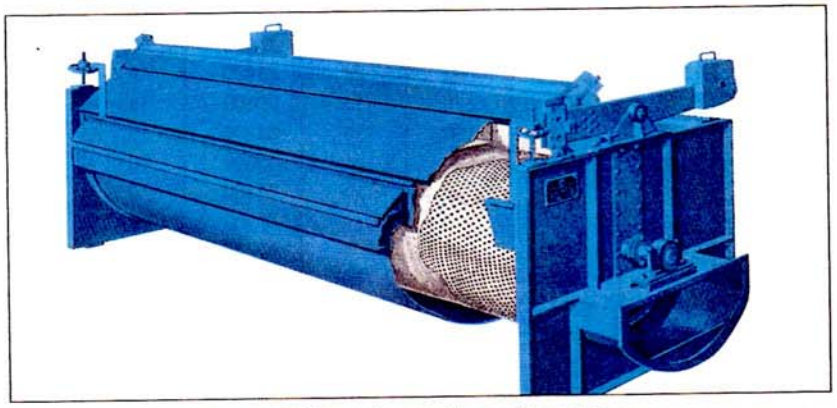

Figure 1: A Hooper Gravity Thickener in a decker configuration.

System Description

Whether it is used as a thickener, in virgin or recycle pulp applications, or for fines control, the Hooper™ Gravity Thickener operates on the same principle. As Figure 2 shows, a wire, cloth-covered cylinder (A) rotates in a vat filled with dilute stock. White water drains through the wire into the cylinder, and a mat of thickened stock forms on the cylinder. The water inside the cylinder exits out of a drain (B), while the pulp mat is removed from the outside of the cylinder either by gravity (in slushers), or by a couch roll and doctor blade (in deckers). After the pulp has been discharged, an oscillating shower (C) cleans the wire.

For thickening long fiber virgin pulp or rejects/broke, the 48"x 150" Hooper Gravity Thickener in decker configuration produces up to 5-6% OD pulp from 1% inlet consistencies. As a slusher, 2-3% OD outlet consistencies can be obtained.

In deink applications, or when used for secondary fiber fines control, wire mesh openings permit fines to migrate through the cylinder along with white water. Discharge consistencies of up to 5% can be obtained from .6% inlet consistencies.

System Benefits

Higher Operating Efficiency:
Designed for optimum balance between cylinder diameter and head differential (the difference in water height inside and outside of the cylinder), the Hooper Gravity Thickener forms a thin, loose pulp mat on the cylinder face. This allows a high flow rate through the wire for optimal operating efficiency. Other thickeners have higher head differentials, which quickly create densely packed mats that reduce flow and machine efficiency.

Higher Final OD Consistencies:
Because flow rates are higher through the loose pulp mat on the Hooper thickener, more water is removed from the pulp before it is discharged.

As a result, a Hooper Gravity Thickener can produce OD consistencies up to 6% without pre-thickening vat stock — and without any loss of operating efficiency.

More Consistent Thickening:
The loose mat allows more consistent and even draining across the length of the cylinder, produces more consistent thickening rates.

Less Cylinder Deformation:
Supported by specially constructed cylinder spiders, the cylinder on the Hooper thickener retains the integrity of its diameter far better than conventional rod- or bar-supported cylinders. This means the Hooper thickener operates more consistently and requires less maintenance.

Built-in High Reliability:
Corrosion-resistant construction materials, more durable fabricated cylinder supports, along with precision construction and finishing, all help give the Hooper Gravity Thickener a high level of durability and reliability.

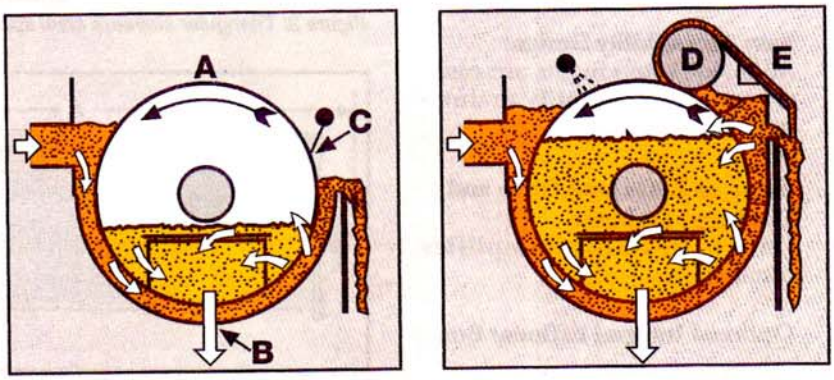

Figure 2: How a gravity thickener works. White arrows show white water flow. In slusher configuration (left), gravity causes the mat to fall off the cylinder. On a decker configuration (right), the mat is picked off the cylinder by a couch roll (D), and removed from the roll by a doctor blade (E).

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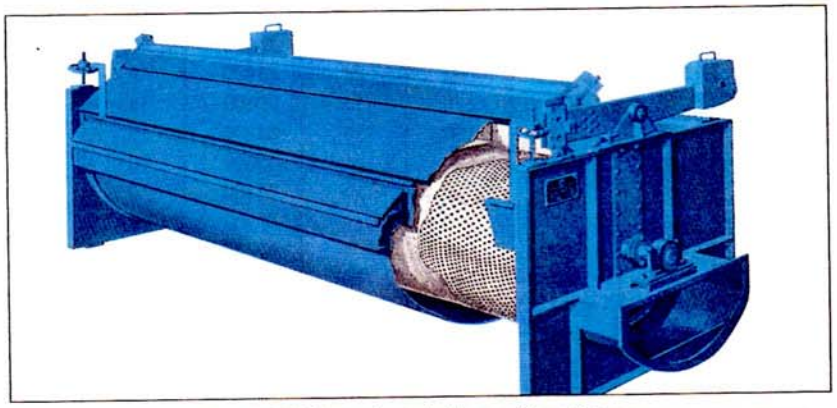

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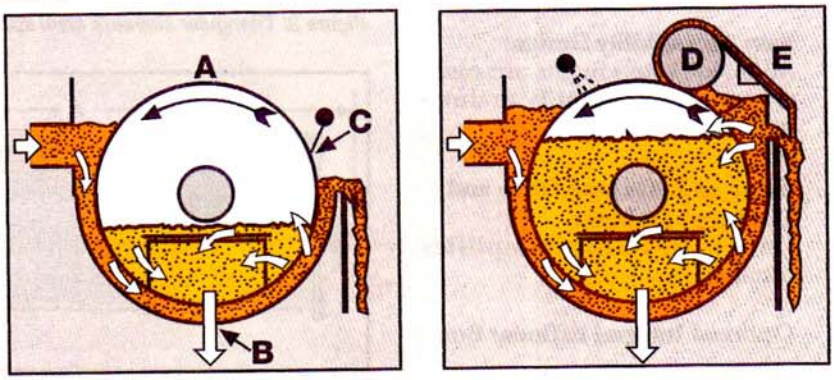

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