

Material Description

Type:	Steel
Composition:	Grinding swarf
Condition:	Wet
Quantity:	One (1) 55-gallon barrel. Only 15 gallons of the material was used for this test.
Fluid Type	Oil (Honilo 980 / Dascolene 617)

Purpose: Understanding the physical characteristics of the incoming material ensures the correct selection of sizing, separation, and recovery equipment.

Test Objectives & Criteria

Primary Objective:	Fluid recovery
--------------------	----------------

These objectives simulate real-world production conditions and quantify potential ROI outcomes.

Conclusions & Recommendations

Test Results Summary:	The Screw Press demonstrated excellent fluid recovery by recovering 6.5 gallons (45 lbs) of fluid out of 15 gallons (96 lbs) of material. No solids were encountered. These results are based on a small sample of material; normal operation may produce different results depending on how representative this sample was.
Fluid Recovery:	6.5 gallons, 45lbs (47% of the incoming material weight)
Volume Reduction:	33%
Throughput:	165 lbs/hr
Equipment Recommendations:	SP-6 Screw Press (larger models can be used to increase throughput)
Testing Engineer:	Austin Atkinson Senior Applications Engineer Phone: 269-382-8239 Email: austina@prab.com

Testing Methodology, Protocols, and Descriptions

Equipment Used / Test Performed		Testing Methodology
1.1	Bulk Density (Incoming Material)	A representative sample of the incoming material was weighed and its volume measured to calculate the bulk density in lbs./ft ³ .
2	SP-6 Screw Press	Each bucket of material was loaded into the hopper of the Screw Press. The pressed material and recovered fluid was collected in separate containers at the discharge of the Screw Press
3.1	Bulk Density (After Screw Press)	A representative sample of the pressed material was weighed, and the volume was measured to calculate the bulk density in lbs./ft ³ .
3.2	Fluid Recovery	The fluid pressed out of the swarf by the Screw Press was collected and measured to calculate the percentage of fluid recovered from the material.

Testing Results

Volume Reduction		Result
Bulk Density Incoming (lbs./ft ³):		47.90
Bulk Density After Screw Press (lbs./ft ³):		44.16
Total Volume Reduction:		33%

Fluid Recovery		Result
Amount of Fluid Recovered (gal):		6.5

Throughput		Result
Screw Press Throughput (lbs./hr):		165

Photos & Visual Data

Figure 1 – Incoming Material



Figure 2 – After Screw Press



NOTICE: PRAB's free materials testing program verifies performance metrics before purchase, ensuring your investment delivers predictable results. Results may vary depending on production conditions.