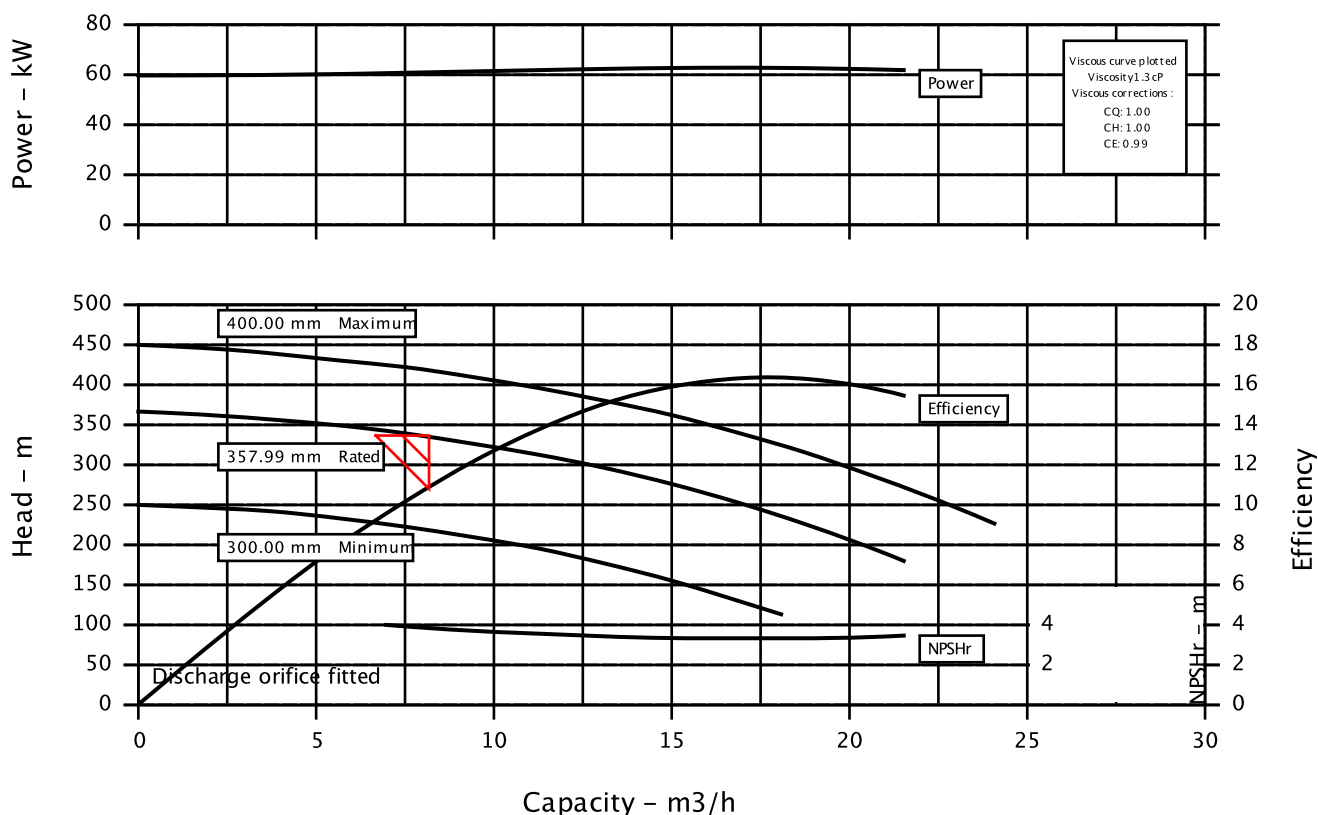


Customer	: GS EC	Pump / Stages	: 2 HED 16 / 2
Customer reference	:	Based on curve no.	: 2 HED 16-LL-P001
Item number	: 53P-138A/B	Flowserve reference	: 136433 Version 1
Service	: Slurry Boosting Pump	Date	: June 12, 2013

Operating Conditions	Materials / Specification
Capacity : 8.1 m3/h	Material column code : C6
Water capacity (CQ=1.00) : 8.1 m3/h	Pump specification : -
Normal capacity : -	
Total Developed Head : 336.50 m	<b>Other Requirements</b>
Water head (CH=1.00) : 336.50 m	Hydraulic selection : API-610 11th Edition
NPSH available (NPSHa) : 119.5 m	Construction : API-610 11th Edition
NPSHa less NPSH margin : -	Test tolerance : API-610 11th Edition
Maximum suction pressure : 17.0 barg	Driver Sizing : API 610
	Seal configuration : Double Seal
Liquid	
Liquid type : Hydrocarbon	
Temperature / Spec. Gravity : 331 C / 0.900	
Solid Size - Actual / Limit : - / -	
Viscosity / Vapor pressure : 1.3 cP / 1.65 bara	

Performance	
Hydraulic power : 6.71 kW	Impeller diameter
Pump speed : 2950 rpm	Rated : 358.0 mm
Efficiency (CE=0.99) : 11.0 %	Maximum : 400.0 mm
	Minimum : 300.0 mm
NPSH required (NPSHr) : 3.5 m	Suction specific speed : 5110 US units
Rated power : 61.2 kW	Minimum continuous flow : 6.7 m3/h
Maximum power : 63.5 kW	Maximum head @ rated dia : 365.24 m
Driver power : 75.0 kW / 101 hp	Flow at BEP : 17.7 m3/h
Casing working pressure : 49.2 barg	Flow as % of BEP : 45.9 %
(based on shut off and Rated specific gravity @ Cut dia)	Efficiency at normal flow : -
Maximum allowable : 100.0 barg	Impeller dia ratio (rated/max) : 89.5 %
Hydrostatic test pressure : 150.0 barg	Head rise to shut off : 8.5 %
Est. rated seal chamb. press. : -	Total head ratio (rated/max) : 80.5 %

CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS; CAPACITY, HEAD, AND POWER.



\*\* denotes rejection criteria