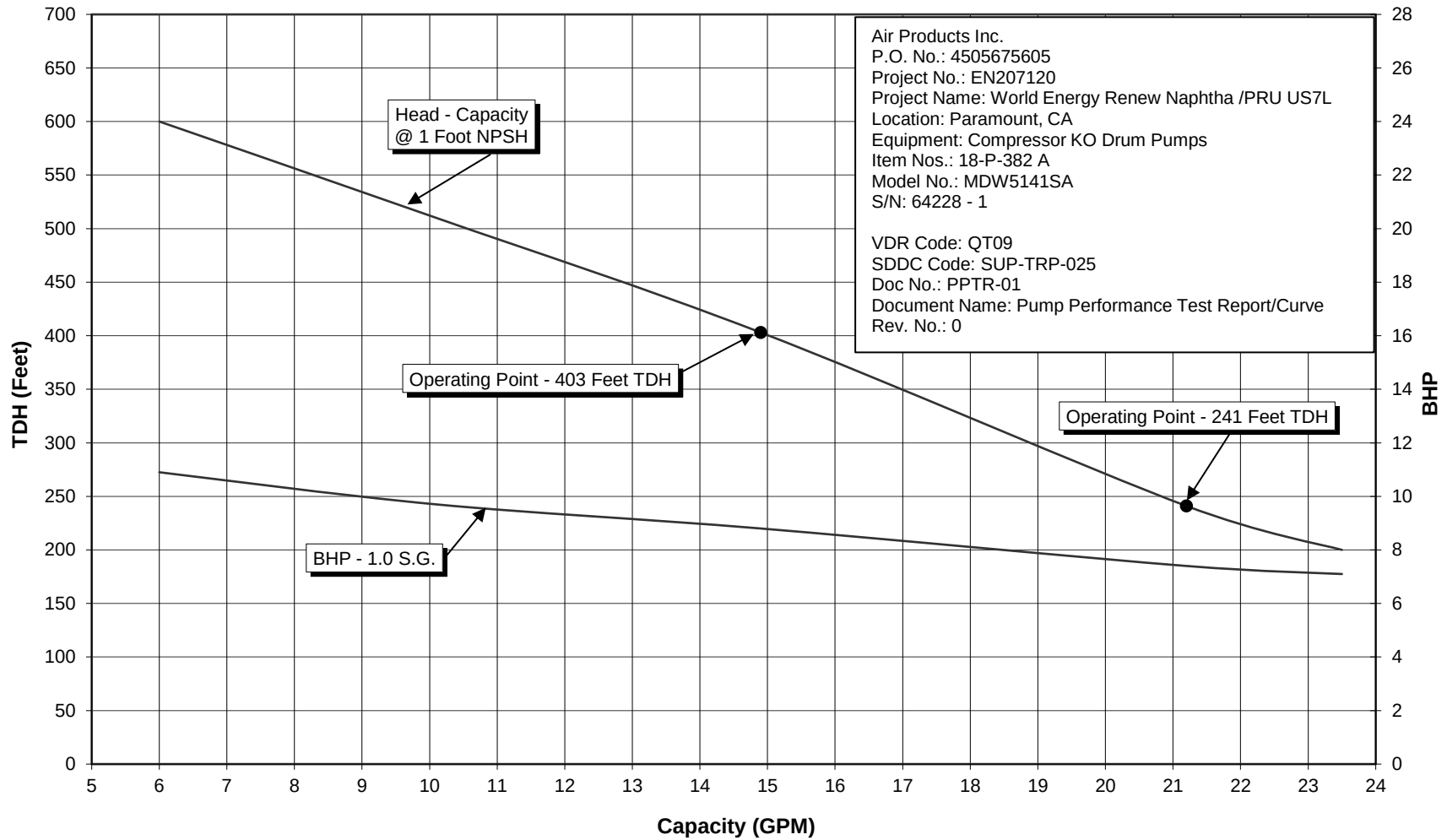
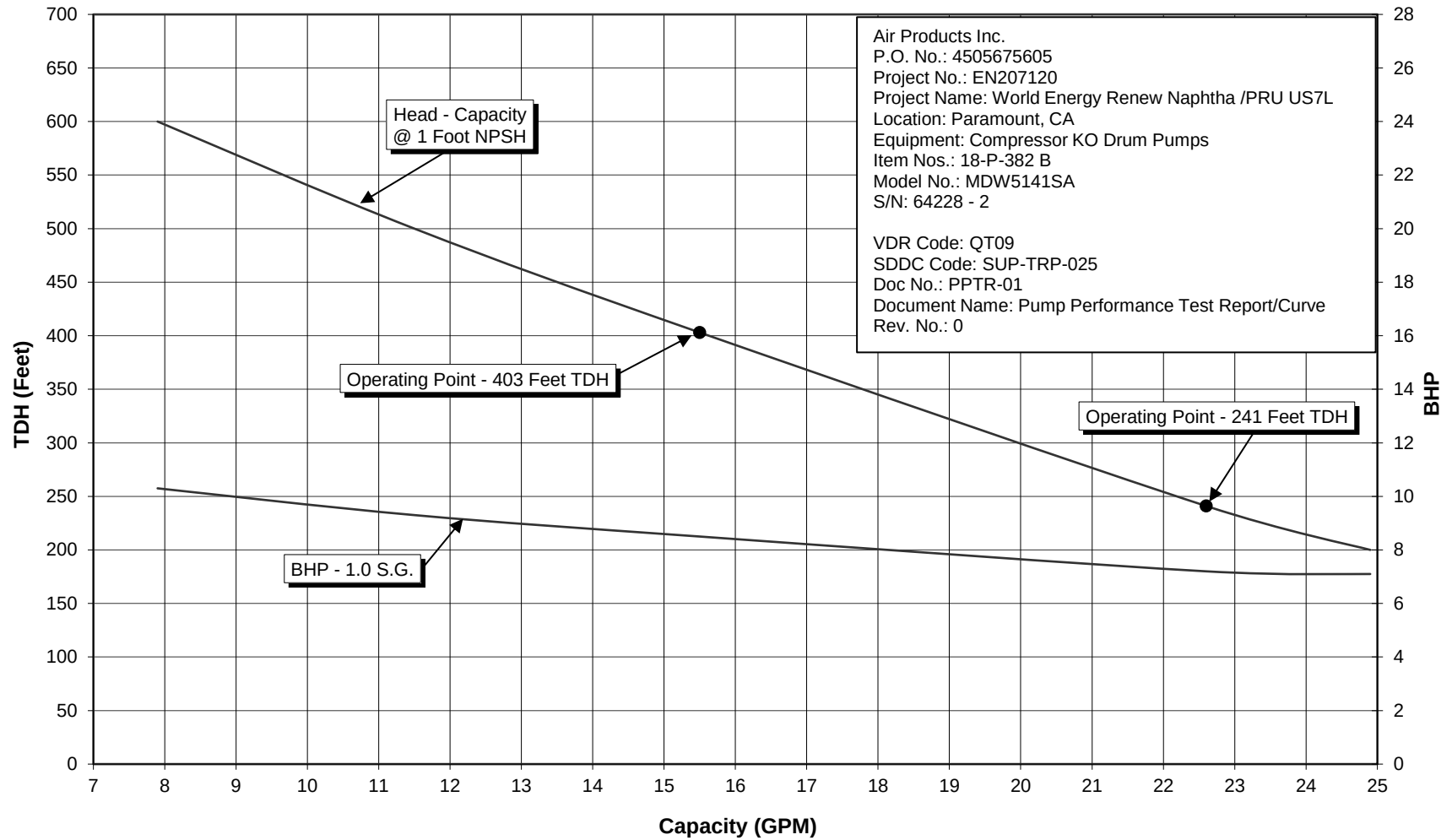


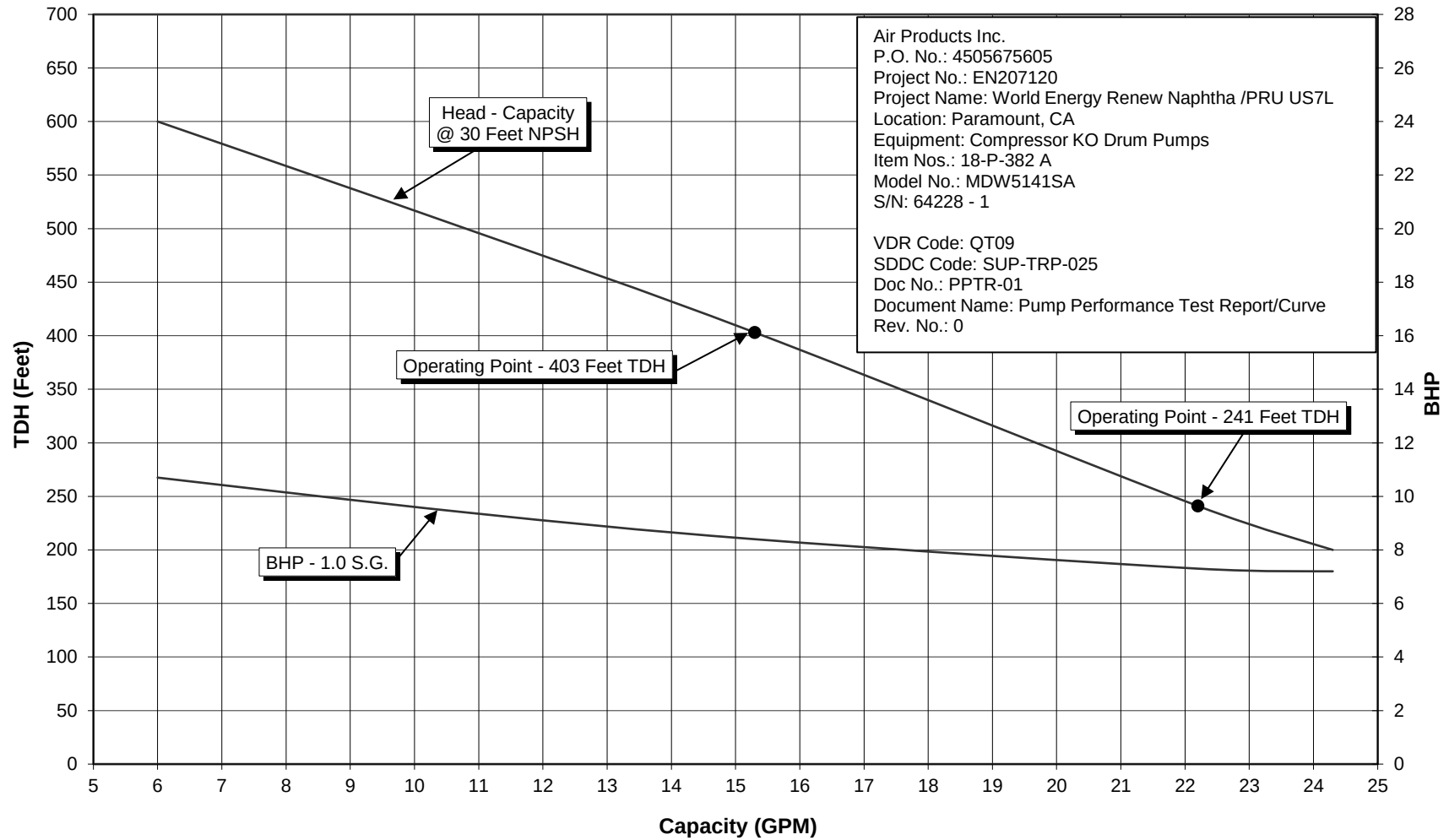
**Roth Pump Company
Model MD5141 @ 3500 RPM
Witnessed 1 Foot NPSH Performance Test**



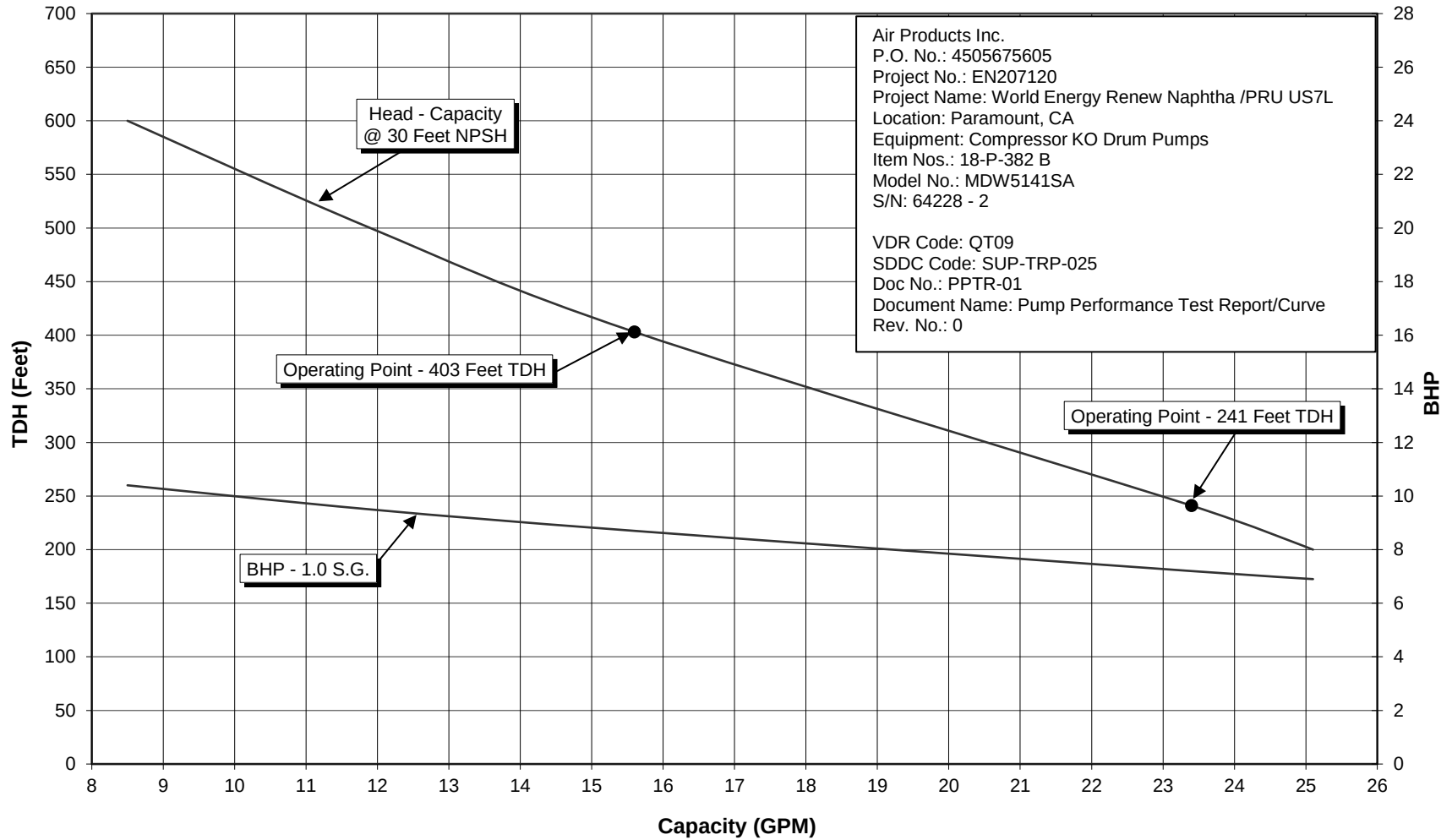
**Roth Pump Company
Model MD5141 @ 3500 RPM
Witnessed 1 Foot NPSH Performance Test**



**Roth Pump Company
Model MD5141 @ 3500 RPM
Witnessed Cold Water Performance Test**



**Roth Pump Company
Model MD5141 @ 3500 RPM
Witnessed Cold Water Performance Test**



Vibration Analysis

Date:

2/22/2024

Operating Point (PSI)	Position	Unfiltered (V) RMS Limit (in/sec.)	Filtered (V) Limit (in/sec.)	Unfiltered (D) Limit (mil p-p)	Outboard Bearing RMS (in/sec.)	Outboard Bearing Peak (in/sec.)	Outboard Bearing Displacement (mil p-p)	Inboard Bearing RMS (in/sec.)	Inboard Bearing Peak (in/sec.)	Inboard Bearing Displacement (mil p-p)
87	H	0.12	x	2	0.075	0.166	0.536	0.071	0.138	0.536
	V	0.12	x	2	0.051	0.110	0.268	0.057	0.107	0.482
	A	0.12	x	2	0.025	0.059	0.000	x	x	x
	H	x	0.08	x	x	0.070	x	x	0.070	x
	V	x	0.08	x	x	0.050	x	x	0.050	x
	A	x	0.08	x	x	0.010	x	x	x	x
104	H	0.12	x	2	0.074	0.171	0.509	0.068	0.136	0.268
	V	0.12	x	2	0.056	0.108	0.429	0.042	0.102	0.268
	A	0.12	x	2	0.025	0.076	0.000	x	x	x
	H	x	0.08	x	x	0.060	x	x	0.050	x
	V	x	0.08	x	x	0.050	x	x	0.050	x
	A	x	0.08	x	x	0.010	x	x	x	x
174	H	0.12	x	2	0.081	0.188	0.536	0.059	0.127	0.268
	V	0.12	x	2	0.051	0.110	0.268	0.051	0.110	0.268
	A	0.12	x	2	0.025	0.076	0.000	x	x	x
	H	x	0.08	x	x	0.070	x	x	0.060	x
	V	x	0.08	x	x	0.050	x	x	0.050	x
	A	x	0.08	x	x	0.010	x	x	x	x
216	H	0.12	x	2	0.065	0.161	0.455	0.051	0.119	0.268
	V	0.12	x	2	0.051	0.102	0.268	0.042	0.093	0.268
	A	0.12	x	2	0.025	0.085	0.268	x	x	x
	H	x	0.08	x	x	0.060	x	x	0.050	x
	V	x	0.08	x	x	0.050	x	x	0.050	x
	A	x	0.08	x	x	0.010	x	x	x	x
260	H	0.12	x	2	0.059	0.153	0.268	0.059	0.136	0.268
	V	0.12	x	2	0.042	0.093	0.268	0.042	0.093	0.268
	A	0.12	x	2	0.025	0.093	0.268	x	x	x
	H	x	0.08	x	x	0.060	x	x	0.050	x
	V	x	0.08	x	x	0.050	x	x	0.030	x
	A	x	0.08	x	x	0.010	x	x	x	x

Air Products Inc.

P.O. No.: 4505675605

Project No.: EN207120

Project Name: World Energy Renew Naphtha /PRU US7L

Location: Paramount, CA

Equipment: Compressor KO Drum Pumps

Item Nos.: 18-P-382 A

Model No.: MDW5141SA

S/N: 64228 - 1

VDR Code: QT09

SDDC Code: SUP-TRP-025

Doc No.: PPTR-01

Document Name: Pump Performance Test Report/Curve

Rev. No.: 0

Vibration Analysis

Date:

2/22/2024

Operating Point (PSI)	Position	Unfiltered (V) RMS Limit (in/sec.)	Filtered (V) Limit (in/sec.)	Unfiltered (D) Limit (mil p-p)	Outboard Bearing RMS (in/sec.)	Outboard Bearing Peak (in/sec.)	Outboard Bearing Displacement (mil p-p)	Inboard Bearing RMS (in/sec.)	Inboard Bearing Peak (in/sec.)	Inboard Bearing Displacement (mil p-p)
87	H	0.12	x	2	0.111	0.210	0.911	0.089	0.166	0.670
	V	0.12	x	2	0.059	0.118	0.616	0.051	0.103	0.482
	A	0.12	x	2	0.025	0.068	0.268	x	x	x
	H	x	0.08	x	x	0.090	x	x	0.080	x
	V	x	0.08	x	x	0.060	x	x	0.050	x
	A	x	0.08	x	x	0.010	x	x	x	x
104	H	0.12	x	2	0.093	0.178	0.536	0.085	0.161	0.536
	V	0.12	x	2	0.065	0.126	0.509	0.051	0.104	0.402
	A	0.12	x	2	0.034	0.085	0.268	x	x	x
	H	x	0.08	x	x	0.080	x	x	0.080	x
	V	x	0.08	x	x	0.600	x	x	0.030	x
	A	x	0.08	x	x	0.010	x	x	x	x
174	H	0.12	x	2	0.076	0.170	0.536	0.076	0.144	0.536
	V	0.12	x	2	0.054	0.103	0.429	0.042	0.093	0.268
	A	0.12	x	2	0.025	0.076	0.268	x	x	x
	H	x	0.08	x	x	0.080	x	x	0.080	x
	V	x	0.08	x	x	0.050	x	x	0.030	x
	A	x	0.08	x	x	0.010	x	x	x	x
216	H	0.12	x	2	0.102	0.187	0.536	0.093	0.170	0.536
	V	0.12	x	2	0.053	0.108	0.455	0.042	0.085	0.268
	A	0.12	x	2	0.025	0.076	0.010	x	x	x
	H	x	0.08	x	x	0.080	x	x	0.080	x
	V	x	0.08	x	x	0.050	x	x	0.030	x
	A	x	0.08	x	x	0.010	x	x	x	x
260	H	0.12	x	2	0.102	0.195	0.804	0.093	0.178	0.536
	V	0.12	x	2	0.051	0.110	0.268	0.034	0.085	0.268
	A	0.12	x	2	0.025	0.085	0.268	x	x	x
	H	x	0.08	x	x	0.080	x	x	0.080	x
	V	x	0.08	x	x	0.050	x	x	0.050	x
	A	x	0.08	x	x	0.010	x	x	x	x

Air Products Inc.

P.O. No.: 4505675605

Project No.: EN207120

Project Name: World Energy Renew Naphtha /PRU US7L

Location: Paramount, CA

Equipment: Compressor KO Drum Pumps

Item Nos.: 18-P-382 b

Model No.: MDW5141SA

S/N: 64228 - 2

VDR Code: QT09

SDDC Code: SUP-TRP-025

Doc No.: PPTR-01

Document Name: Pump Performance Test Report/Curve

Rev. No.: 0

Air Products Inc.
P.O. No.: 4505675605
Project No.: EN207120
Project Name: World Energy Renew Naphtha /PRU US7L
Location: Paramount, CA

Equipment: Compressor KO Drum Pumps
Item Nos.: 18-P-382 A/B
Model No.: MDW5141SA
S/N: 64228 - 1 & 2

VDR Code: QT09
SDDC Code: SUP-TRP-025
Doc No.: PPTR-01
Rev. No.: 0

CERTIFICATE OF NOISE TEST

S/N: 64228 – 1

Test Point – 200 Feet = 81.8 dba
Test Point – 241 Feet = 82.0 dba (Operating Point)
Test Point – 403 Feet = 82.7 dba (Operating Point)
Test Point – 500 Feet = 81.7 dba
Test Point – 600 Feet = 81.8 dba

S/N: 64228 – 2

Test Point – 300 Feet = 80.9 dba
Test Point – 400 Feet = 81.1 dba (Operating Point)
Test Point – 493 Feet = 82.0 dba (Operating Point)
Test Point – 758 Feet = 81.1 dba
Test Point – 800 Feet = 80.9 dba

Readings taken at 3 Feet from equipment.