Powerhouse

Turbine, Vacuum Pump & Compressor Oil

No. 603

ISO: 22, 32, 46, 68, 100

DESCRIPTION:

Powerhouse is a premium quality, ashless, anti-wear lubricant, blended from high viscosity index (VI) hydroprocessed group II+ and group III base oils and specially selected additives. This lubricant can be used in a variety of turbine, vacuum and compressor applications where manufacturers recommend R&O or AW zinc free type oil. Special anti-oxidation additives make this an extremely long-life lubricant with added varnish control.

PERFORMANCE CHARACTERISTICS:

- **Oxidation resistant (15,000 hours in the ASTM-D943 Oxidation Test)**
  Outstanding resistance to oxidation and varnish formation at both high and low temperatures.
- **Provides excellent anti-wear protection**
  Ashless anti-wear additives provide the highest level of protection against wear and scuffing in all types of pumps. Exclusive friction reducing additives provide reduced wear, operating temperature and horsepower requirements.
- **Superior rust protection**
  Inhibitors protect both steel and yellow metal surfaces against rust and corrosion
- **Demulsibility**
  Designed to separate rapidly from water.
- **High foam resistance**
  Foam inhibitors provide a high level of foam resistance to prevent pump starvation and damage
- **High viscosity index (VI)**
  Maintains fluid viscosity at low and high temperature. Increases hydraulic efficiency
- **Superior filterability**

TYPICAL APPLICATIONS:

Powerhouse meets, exceeds, or is approved by the following for non-geared gas, steam, and hydroelectric turbine bearing lubrication when used in proper ISO grade:

Afnor NF 48-603 part 1 HR and part 2 HH & HL
General Electric GEK-32568F/G, GEK 28143A, GEK-101941A
Solar ES 9 224 requirements for gas turbine oils
ASTM D4304
British Standard BS-489
British Boveri HTGD 90117
DIN 51515-1 (TD) & (TG)
Brown-Boverie
Morgan (Rev. 1.1 & Rev. 2.5)
Alstom Power HTGD 90117 V0001 S
Siemens Westinghouse M spec 55125Z3
Siemens TLV 901304 and 9013 04
Japanese Industrial Standard K 2213 type
AIST (US STEEL) 120
ISO 8068

**Suitable for use in hydroelectric turbines, land and marine steam turbines and associated reduction gears when OEM recommends R&O or AW type oil. Always confirm that the product selected is consistent with the original equipment manufacturers' recommendation for the equipment operating conditions and customer's maintenance practices.*

Powerhouse can be used in a wide variety of compressor applications where manufacturers recommend an R&O or AW type oil. This includes piston and screw type compressors.

Reciprocating Compressors	Screw Compressors	Lobe Compressors
Rotary Compressors	Blowers	Vacuum Pumps

Compressors Aplications
DIN 51506 (VBL, VCL, VDL)
ISO/DP 6521 (DAA, DAB, DAH, DAG)

Hydraulic Applications
DIN 51524-1 (HL)
DIN 51517-2 (CL)

SUMMARY:

Turbine systems are constantly subjected to adverse conditions such as moisture, heat, long operating intervals, and high pressures. Each of these factors affects the ability of the system to provide maximum output when needed. Bearing, pump, valve, gear, ring, vane, and cylinder wear are very common. Gum and varnish buildup lead to deterioration of seals, O-rings and overall system performance. Oil deterioration and oxidation results not only in excessive wear, but frequent fluid changes and higher labor costs.

Powerhouse is formulated to greatly reduce these problems and provide maximum turbine system efficiency.

TYPICAL SPECIFICATIONS:

Oxidation Stability, TOST, hr[1]	ASTM D-943	15,000+
Four Ball Wear Test 40 KG, 1 hour @ 167° F	ASTM D-2266	Scar 0.4
Copper Strip Corrosion	ASTM D-130	1a
Corrosion test, Steel,	ASTM D-665	Pass
Foam Test	ASTM D-892	Pass
Rust Test	ASTM D-665	Pass
Demulsibility Test	ASTM D-1401	Pass

ISO Grade	**22**	**32**	**46**	**68**	**100**
SAE Grade	**10W**	**10**	**20**	**20**	**30**
Viscosity @ 40º C, cSt: @ 100º C, cSt:	 21.4 4.4	 32.0 5.4	 46.0 6.8	 64.6 8.5	 95.0 11.0
Viscosity Index:	116	112	112	112	112
Flash Point, COC, ºF	401	432	440	473	504
Pour Point, ºF:	-30	-27	-20	-15	-10
Color, Saybolt:	+30	+30	+30	+30	+25
API Gravity:	34.2	32.7	32.0	31.7	31.4