

**Product Number 2227**

## **PAZ PERFECT HPT 46**

Long service life EP turbine oil

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### **Product description**

Modern steam turbines generally impose more severe conditions on the oil than earlier types, while at the same time requiring greater reliability steam and bearing temperatures, as well as oil pressures are higher, and the rate of oil circulation is often more rapid, while the output from power stations is performed by fewer units of larger size greater stability and reliability is therefore required of the oil, and some authorities have issued more stringent specifications for turbine oils.

**PAZ PERFECT HPT 46** has been formulated to satisfy these conditions and is used for the lubrication of steam, and industrial gas turbine.

### **PERFORMANCE**

When subjected to oxidation test (the TOST) which closely corresponds to the conditions found in steam turbine service, particularly during the early stages of oxidation,

**PAZ PERFECT HPT 46** performs well. At 10,000 hours the amount of oxidation, sludge and organic acidity which develops is minimal and corrosion of sensitive metals is negligible, furthermore the deterioration in demulsibility of the oxidized oil is reduced to insignificant values. In practice these factors which limit the effective life of oils in steam turbines and similar applications, a long service life will be obtained from **PAZ PERFECT HPT 46**.

The formulation has also been carefully checked to ensure that a low tendency to carbon formation when exposed in this films on very hot surfaces has been achieved as has a natural low foaming tendency. The rapid release of fine air bubbles which is characteristic of **PAZ PERFECT HPT 46** is a property of even greater importance.

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### **Applications**

**PAZ PERFECT HPT 46** is the ideal product to lubricate steam turbines, heavy duty gas turbines and combined cycle systems and related applications.

**PAZ PERFECT HPT 46** approved by Siemens

**PAZ PERFECT HPT 46** is ashless turbine oil blended from group II base stock and additives, free of zinc and chlorine, having anti-rust, anti-oxidation and EP properties.

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## Specifications/Performance

British Standard BS 489
DIN 51515 - 2
Siemens TLV 901305- <b>approved</b>
General Electric GEK 32568F, GEK 46506E GEK 101941A
ASTM D 4304 – 06a TYP II
ALSTOM (ABB) – HTGD 90117 V0001 W

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## Typical Characteristics

PAZ PERFECT HPT46	METHOD	PAZ PERFECT HPT46
Base Fluid		Mineral group II
Kinematic Viscosity @ 40°C, cSt	DIN EN ISO 3104	46.46
Viscosity Index	DIN ISO 2909	106
Air Release @ 50°C, min	DIN ISO 9120	3'54"
Neutralization number, mg KOH/g	DIN 51 558-1	0.1
Water Content, ppm (mg / kg)	DIN EN ISO 12937	20
Foaming @ 24°C ml / ml	ISO 6247 Seq 1	0/0
Water Separability sec	DIN 51589-1	60
Demulsibility min	DIN ISO 6614	4' 37"
Density @ 15°C, kg/cubic meter	DIN 51757	0.86522
Flash point, °C, COC	DIN ISO 2592	234
Pour Point, °C	DIN ISO 3016	-15
ISO 4406 Cleanliness Level	ISO 4406	17/15/14
Copper corrosion, 3hrs @ 100C	DIN EN ISO 2160	1A
Corrosion on Steel, Procedure B	DIN ISO 7120	Pass
Oxidation stability h Time to an increase of Total Acid Number of 2 mg KOH/g	DIN EN ISO 4263-1	>10000
Oxidation Stability, RPVOT, min	ASTM D2272	2122
FZG A/8.3/90, failure Load Stage	DIN ISO 14635-1	10

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## Features/Benefits

- ▶ Excellent corrosion protection.
- ▶ Good air release characteristics.
- ▶ Exceptional thermal and oxidation stability giving long life.
- ▶ Excellent water separation properties.
- ▶ Extra FZG requirement.

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## Storage

- ▶ All packages should be kept tightly closed and stored under cover in order to prevent any kind of contamination. (By water etc.)

## **Health, safety and environment**

- ▶ Product is not designated as hazardous.
- ▶ When used properly product does not represent any risk to health.
- ▶ It is most recommended to keep personal hygiene when using the product.
- ▶ Avoid any contact between product and heat source or fire.
- ▶ For further information refer to Safety Material Data Sheet.

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## **Note**

Paz Lubricants & Chemicals makes its utmost in order to secure accuracy and validity of the above information, nevertheless it is the user's obligation to evaluate and use the products safely and within the scope advised in the Product Data Sheet and MSDS, and to comply with all applicable laws and regulations.