

# Recommended additive treatment of gas turbine fuel of diesel grade

## 1. General

Distillate fuels are usually of high quality, but contamination and degradation of the fuel may take place during transportation and storage.

Contamination by salt water during transportation in barges and tankers are not uncommon and will usually result in an unacceptably high level of sodium in the fuel. Transportation, storage and pumping of distillate fuels in facilities used for residual fuels or leaded gasoline causes vanadium or lead contamination if these facilities are not adequately cleansed prior to their use.

## 2. Siemens recommendations

Siemens recommends anti corrosion additive treatment of the gas turbine fuel in all applications where there is any risk of contamination of the fuel. The use of a fuel with a low ash sticking point temperature, a melting point below the material temperature, introduces a great risk of high temperature corrosion in the gas turbine and must be avoided even for a short period of time.

This recommendation should be considered as an “insurance treatment” and can in no way replace good fuel handling management. Fuels with higher levels of sodium, potassium, vanadium, lead, zinc or nickel should be treated according the instructions given in K8436-3.

Siemens recommends injection of additive as a function of fuel flow between a storage tank and a day tank for treated fuel. Siemens can supply, if requested, additive dosage equipment.

Siemens should be consulted in every specific case before introduction of additive treatment.

**3. Recommended additives:**

Additive:	Turbotect 132	Turbotect 153	KI-70
Manufacturer:	Turbotect Ltd	Turbotect Ltd	Baker Petrolite
	P.O Box 1411	P.O Box 1411	Kirkby Bank Road
	CH-5401 Baden	CH-5401 Baden	Knowsley Industrial Park
	Switzerland	Switzerland	Liverpool L33 7SY
			United Kingdom
Phone:	+41-(0)56-200 5020	+41-(0)56-200 5020	+ 44 -(0)151 546 2855
Fax:	+41-(0)56-200 5522	+41-(0)56-200 5522	
Composition:	Mg = 8.0 %	Mg = 6.0 %	Mg = 6.0 %
		Cr = 1.8 %	Cr = 1.8 %
Dosage rate:	16 ppm (vol)	21 ppm (vol)	21 ppm (vol)
	= 16 ml/m <sup>3</sup>	= 21 ml/m <sup>3</sup>	= 21 ml/m <sup>3</sup>
	= 0.016 l/m <sup>3</sup>	= 0.021 l/m <sup>3</sup>	= 0.021 l/m <sup>3</sup>

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