

Siemens AG, E F PR SU EN TL 3 2, Mellinghofer Str. 55,
45473 Muelheim an der Ruhr

Lubrication Engineers, Inc.
Mr. John Sander
VP of Technology
1919 East Tulsa
Wichita, Kansas 67216
United States of America

Name	Dr. Ludger Quick
Department	E F PR SU EN TL 3 2
Telephone	+49 (208) 456-2953
Fax	+49 (208) 456-2139
Mobile	+49 (173) 7058293
E-mail	ludger.quick@siemens.com
Our reference	SU EN TL3/09/1079
Date	December 7, 2009

**Turbine Oil Approval according to Siemens TLV 901304
"6462 Monolec Turbine Oil"**

Dear Mr. Sander,

We carried out approval testing on the product "6462 Monolec Turbine Oil" according to Siemens turbine oil specification TLV 9013 04. The results are in accordance with this specification. They are listed in the enclosed test certificate.

Herewith we give the formal approval for "6462 Monolec Turbine Oil" for use in Siemens turbosets with and without gearbox. The product will be published in the list of approved turbine oils.

Sincerely yours,

Enclosure
Test Certificate



Dr. Ludger Quick

Siemens AG
Energy Sector; Management: Wolfgang Dehen
Fossil Power Generation Division; Management: Michael Suess
Products; Management: Roland Fischer

Mellinghofer Str. 55
45473 Muelheim an der Ruhr
Germany

Tel.: +49 (208) 456 0
Fax: +49 (208) 456 2400

Siemens Aktiengesellschaft: Chairman of the Supervisory Board: Gerhard Cromme;
Managing Board: Peter Loescher, Chairman, President and Chief Executive Officer; Wolfgang Dehen, Heinrich Hiesinger,
Joe Kaeser, Barbara Kux, Hermann Requardt, Siegfried Russwurm, Peter Y. Solmssen
Registered offices: Berlin and Munich, Germany; Commercial registries: Berlin Charlottenburg, HRB 12300, Munich, HRB 6684
WEEE-Reg.-No. DE 23691322

SIEMENS**Test Certificate**

Lube Oil Analysis

No. S2746

11130

Code word:	Approval TLV 901304	Customer:	Mr. John Sander
Turbine type:		Department:	Lubrication Engineers
Serial No:		Telephone:	
Oil type:	6462 Monolec Turbine Oil	SAP account no:	
Manufacturer/Supplier:	Lubrication Engineers	Date of receipt:	2009-10-20
Sampling date:		Sampling:	sample for approval

Test Results:

Air release at 50°C	DIN ISO 9120	3 min
Neutralization Number	DIN 51558-1	0.11 mg KOH/g
Water content	DIN 51777-1	< 0.01 %
Foaming tendency at 25°C	ISO 6247	0 ml
Foam stability at 25°C	ISO 6247	0 s
Rest after 600 s at 25°C	ISO 6247	0 ml
Water separability	DIN 51589-1	255 s
Viscosity at 40°C	DIN 51562-1	45.9 mm²/s
Density at 15°C	DIN 51757	0.866 g/ml
Colour (ASTM scale)	DIN ISO 2049	< 0.5
Flash point (Cleveland open cup)	DIN EN ISO 2592	226 °C
Pour point	DIN ISO 3016	< -12 °C
Corrosiveness to copper	DIN EN ISO 2160	passed

Comments:

Failure load stage (FZG test, DIN ISO 14635-1): 10 (test carried out by TÜV NORD Systems GmbH)

Elaborator: **Henrichs**Testing date: **2009-12-07**Counter-signature: **sgd. Quick**