

ACE Group

115 MW (50Hz.) Diesel Engine Generating Station Equipment

This diesel generating station was completed and put into operation , The station has 9 diesel engines type 9TM620 manufactured by STORK-WARTSILA DIESEL CO., HOLLAND with a single unit capacity of 12.75 MW; 9 matching generators type HSG1600S14 were manufactured by ABB, FINLAND with a single unit capacity of 12.43 MW. The 9 sets were installed into 3 relatively independent units.

The 110 kV switchyard is equipped with 3 main-transformers 121 kV/11kV 47 MVA type STROD/BTOD CL-2 manufactured by TAKAOKA ELECTRIC CO. LTD., JAPAN. The 110kV GIS was manufactured by NISSIN ELECTRIC CO. LTD., JAPAN.

The automation level is high since the on-line computer monitoring system is also controlling the substation. The power generation units have been extremely reliable since placed into operation. The annual consumption of fuel oil (180 cst heavy fuel oil) is 183 g/kwh. The annual consumptin of lube oil is 1.6 g/kwh. The total operation hours are 9000 hrs.

1: Diesel Engines (9 each)

Type: 9TM620
Manufacture: STORK WARTSILA DIESEL CO.
Holland
Rated output: 12,750KW
Rated speed: 428rpm
Consumption of fuel oil: 174G/KWH +5%
Consumption of lube oil: 1.3+0.3G/KWH
Greatest weight/ piece: 270T
Highest exhaust temperature ahead of the turbine: 550 C degrees
Highest exhaust temperature of single cylinder: 425 C degrees
Ambient temperature: 38 Centigrade (ISO)

2: Generators (9each)

Type: HSG 1600 S14
Rated capacity: 15,537 KVA
Cos Factor : 0.8
Frequency : 50 HZ
Rated current: 815A
Rated voltage: 11KV
Greatest weight/ piece: 55T
Rated speed: 429 rpm
Ambient temperature < or =40 Centigrade degrees(ISO)

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3: Transformers (3)

Type: STROD/BTRD. CL-2
Manufacturer: TAKAOKA ENGINEERING CO.
LTD JAPAN
Rated capacity: 47000 KVA
Rated voltage: 11KV/121KV
Weight: 58T

4:GIS

Type:3-pole single -throw
Manufacturer: NISSIN ELECTRIC CO.,
LTD JAPAN
Rated voltage: 126KV
Rated current: 1250A



9 diesel engine power generation sets type 9TM620

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The 110KV Power Station with 3 main-transformers 121 KV/11KV, 47 MVA and the 110 KV GIS



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