



GE Energy
Oil & Gas

FLOTECH

GE OIL AND GAS - HIGH SPEED RECIPROCATING COMPRESSORS

 CUSTOMER: N/A
 LOCATION: DATE:
 ELEVATION (FT): 50 ATMOS. PR. (PSIA): 14.70 AMB. TEMP (DEG F): 100
 Tc (DEG R): 374.0 Pc (PSIA): 670.9 PISTON SPEED (FPM): 1155
 DRIVER: ELECTRIC MOTOR COMPRESSOR: GE STROKE (IN): 7
 MODEL: Siemens MODEL: E702 ROD DIA (IN): 2.25
 MAX BHP: 1340 MAX BHP: 2400 R/L TENSION: 40000
 MAX RPM: 990 MAX RPM: 1000 R/L COMPR.: 47500
 DRIVER LOAD (%): 86.2 DESIGN RPM: 990 R/L COMBINED: 87500

-----CYLINDER DATA-----

CYL. BORE..... (IN) 11.000 11.000
 M.A.W.P. (PSIG) 1250 1250
 CYL. ACTION . (DA/SA) DA DA
 PISTON DISPL... (CFM) 746.3 746.3

-----PRESSURES AND TEMPERATURES-----

INLET PRES.... (PSIG) 201.0 201.0
 DISCH. PRES... (PSIG) 410.1 410.1
 COMP. RATIO . (Pd/Ps) 1.969 .000
 Ts..... (DEG-F) 80 80
 Td (ADIAB)... (DEG-F) 161 161
 Td (ESTIMATED) (DEG-F) 185 185

-----FLOW CONDITIONS AND HORSEPOWER-----

CAP. PER CYL. (MMSCFD) 13.43 13.43
 STAGE CAP... (MMSCFD) 26.86 .00
 SP. GRAVITY.. (Air=1) .650 .650
 K VALUE (Cp/Cv) 1.260 1.260
 ZS..... .965 .965
 ZD..... .959 .959
 CYL. IHP .. (PER/CYL) 563 563
 CYL. BHP (TOTAL) 1156

-----CLEARANCE DATA-----

H.E. BASE CLR.... (%) 13.84 13.84
 C.E. BASE CLR.... (%) 12.91 12.91
 ADDED CLR H.E.... (%) .00 .00
 PKT. TRAVEL.... (IN/%) .0/.0 .0/.0
 H.E. SPCS USED/AVAIL 0/4 0/4
 H.E. TOTAL CLR... (%) 13.84 13.84
 ADDED CLR C.E.... (%) .00 .00
 C.E. SPCS USED/AVAIL 0/4 0/4
 C.E. TOTAL CLR... (%) 12.91 12.91
 H.E. VOL. EFF.... (%) 85.00 85.00
 C.E. VOL. EFF.... (%) 85.67 85.67

-----ROD LOADS AND REVERSALS-----

VLV. VEL. INLET. (FPM) 7070 7070
 VLV. VEL. DISCH. (FPM) 7070 7070
 ROD LOAD TENS... (LB) 18240 18240
 ROD LOAD COMPR.. (LB) 20670 20670
 ROD LOAD.. (COMBINED) 38910 38910
 REVERSAL.... (YES/NO) YES YES

Notes: 2x Siemens Finspång SGT-800 gas turbines
 30,000 Nm3/hr at 14 bar(g) suction with 28 bar(g) discharge.

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