

IK-301  
SYNGAS

MANUFACTURER: CLARK BROS CENTRIFUGAL OR AXIAL COMPRESSOR DATA SHEET IK-301 SPEC. NO. 1  
 COMPRESSOR FOR: 1000 TID AMMONIA PLANT LOCATION BLYTHEVILLE, ARKANSAS ELEVATION FT. ATMOS. PRESSURE PSIA REQ. NO. IK-3

MACHINE NO.	FLOW SHEET NO.	PLANT EQUIP. NO.	MACHINE NO.	FLOW SHEET NO.	PLANT EQUIP. NO.	MACHINE NO.	FLOW SHEET NO.	PLANT EQUIP. NO.
<b>A - SERVICE</b>			<b>D - DRIVE</b>			<b>J - CONSTRUCTION</b>		
TYPE OF DRIVER (MOTOR) (TURBINE) <u>GAS TURBINE</u>			TYPE OF DRIVER (MOTOR) (TURBINE) <u>GAS TURBINE</u>			CASE MATERIAL <u>CS FS FS</u>		
DRIVER HP <u>2229</u>			DRIVER HP <u>2229</u>			DIAPHRAGMS <u>CI CI CI</u>		
DRIVER SPEED RPM <u>4860</u>			DRIVER SPEED RPM <u>4860</u>			DIFFUSERS		
MOTOR OR TURBINE DATA SHEET DRWG NO.			MOTOR OR TURBINE DATA SHEET DRWG NO.			GUIDE VANES (OR STATIONARY BLADES) <u>CI CI CI</u>		
TYPE & MAKE OF GEAR (IF ANY) <u>GE - 10LEK</u>			TYPE & MAKE OF GEAR (IF ANY) <u>GE - 10LEK</u>			CASE WEAR RINGS <u>ALUMINUM</u>		
GEAR SIZE OR DESIGNATION <u>51-458A</u>			GEAR SIZE OR DESIGNATION <u>51-458A</u>			SHAFT <u>FORGE</u>		
SPEED RATIO <u>4860/1058</u>			SPEED RATIO <u>4860/1058</u>			SHAFT SLEEVES		
THERMAL BHP RATING <u>(20229-19625)</u>			THERMAL BHP RATING <u>(20229-19625)</u>			IMPELLER HUBS <u>SAC 4140</u>		
MECH. BHP RATING <u>19625</u>			MECH. BHP RATING <u>19625</u>			IMPELLER BLADES <u>30K 4140</u>		
<b>E - CONTROL</b>			<b>F - COOLING WATER (GPM-TOTAL)</b>			<b>K - GENERAL</b>		
METHOD OF CAPACITY CONTROL			COOLING WATER AVAILABLE AT 85°F <u>85 85</u>			PRICES ARE: (FOB) (FAS) (ERT ALLOWED)		
(SPEED) (INLET VANES) (INTERSTAGE VANES) (BYPASS)			INTERCOOLER (EXTERNAL) GPM <u>1020 1020</u>			PRICE OF COMPRESSOR ONLY		
DIAPHRAGMS GPM			DIAPHRAGMS GPM			ADD FOR:		
CASE GPM			CASE GPM			PRICE FOR DRIVE, GEAR, ETC.		
BEARINGS OR OIL SYSTEM GPM <u>150</u>			BEARINGS OR OIL SYSTEM GPM <u>150</u>			PRICE FOR DRIVER (IF FURNISHED)		
SEALS OR PACKING GPM			SEALS OR PACKING GPM			TOTAL PRICE		
<b>G - SEALS - TYPE (OR NO.) (LABYRINTH) (OIL FILM) ETC.</b>			<b>H - BEARING - TYPE - RADIAL</b>			SHIPPING POINT <u>OLEAH N.Y.</u>		
SEAL LEAKS: AIR INTO COMPRESSOR <u>OIL FILM</u>			TYPE - THRUST <u>SLIDING</u>			WT OF COMPRESSOR & BASE		
GAS TO ATMOSPHERE <u>NO LEAK</u>			LUBRICATION - RADIAL <u>ALL CHELCO TYPE</u>			ACCESSORIES		
IF DUAL FLOW TO EVAPORATOR, WHERE DISCHARGED			- THRUST <u>FORGE FEED</u>			GEAR		
			INTEGRAL OR SEPARATE OR PUMP <u>FORGE FEED</u>			DRIVER		
			OIL COOLER, TYPE, SIZE <u>SEPHILIC</u>			SHIPMENT: WKS FROM RECPY OF ORDER		
<b>I - CONNECTIONS</b>			<b>J - CONNECTIONS</b>			* BETWEEN THE LAST 2 CASES THE ENGIN IS COMED TO 40°F AND H <sub>2</sub> O IS DROPPED OUT. BEINGS WERE FURNISH THE REFRIGERANT - COOLED COOLER & REC. DRUM TO GO DOWNSIDE OF H <sub>2</sub> O WATER COOLE INTERCOOLER. ** 2ND SECTION 3RD CASE (2BF-7-5) IS BLYTHEVILLE		
SUCTION, SIZE <u>2B8 2BF-7 2BF-5</u>			SUCTION, SIZE <u>10 10 10/10</u>					
RATING & TYPE OF FACING <u>GOOD 1500 1500</u>			RATING & TYPE OF FACING <u>GOOD 1500 1500</u>					
LOCATION <u>UP UP UP</u>			LOCATION <u>UP UP UP</u>					
DISCHARGE, SIZE <u>8 8 8/10</u>			DISCHARGE, SIZE <u>8 8 8/10</u>					
RATING & TYPE OF FACING <u>GOOD 1500 1500</u>			RATING & TYPE OF FACING <u>GOOD 1500 1500</u>					
LOCATION <u>UP UP UP</u>			LOCATION <u>UP UP UP</u>					
BECHTEL CORPORATION SAN FRANCISCO			CONTINENTAL OIL COMPANY 1000 TID AMMONIA PLANT BLYTHEVILLE, ARKANSAS			JOB NO. <u>4215</u> REV. <u>1</u>		
						<u>DS-1K-301</u>		

C/T 9650 A

FORM 270

MANUFACTURER: GENERAL ELECTRIC COMPANY (Schenectady, N.Y.)  
 TURBINES FOR: 1000 T/D AMMONIA PLANT  
CONTINENTAL OIL CO PROJECT

**SINGLE STAGE GENERAL PURPOSE  
 STEAM TURBINE DATA SHEET**

1KT-301

LOCATION BLYTHEVILLE, ARKANSAS SPECIFICATION NO. \_\_\_\_\_

REQ. NO. 1K-3

FLOW DIAGRAM NO. PLANT EQUIPMENT NO.		FLOW DIAGRAM NO. PLANT EQUIPMENT NO.																			
SERVICE - DRIVER FOR: CONTINUOUS OR STAND BY SERVICE		CONSTRUCTION: MFRS TYPE & SIZE																			
SPEED	RPM	STEAM CHEST MTL.	STEAM RING	CASE MTL.	CASE SPLIT HORIZONTAL OR VERTICAL	CASE SUPPORTED AT CENTERLINE	COVER REMOVABLE WITHOUT REMOVING PIPING	SEPARATE NOZZLES OR SECTIONAL NOZZLE BLOCK	NOZZLE LOCATION (BOTT. CASE) (TOP CASE)	TYPE SHAFT SEALS: (LAGER) (LABYRINTH)	NO. OF RINGS	WATER REQ'D FOR SEALS	SHAFT MTL / DIAM.	SHAFT PROTECTION AT SEALS	GOVERNOR VALVE	SEPARATE OVERSPEED VALVE - TYPE	STEAM STRAINER	NO. ROWS OF BLADES	PITCH DIAMETER	COUPLING GUARD, TYPE & MTL.	
H.P. RATING (BASIS FOR BID)	BHP	CAST STEEL - ASTM	A27 Gr.	CAST STEEL - " "	" "	YES	DISCONNECT THROTTLE VALVE	SEPARATE TOP	" "	7 RINGS	L.A.B.Y.	" "	NONE	TYPE / TRIM	" "	" "	" "	" "	" "	" "	" "
ROTATION (FROM COV END)	CW OR CCW	HORIZONTAL	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
STEAM SUPPLY PRESSURE	PSIG	NO. ROWS OF BLADES	25.20	28.20	28.43	28.68	32.68	33.39	33.39	35.37											
QUALITY	%	PITCH DIAMETER	25.20	28.20	28.43	28.68	32.68	33.39	33.39	35.37											
TOTAL TEMPERATURE	°F	COUPLING GUARD, TYPE & MTL.																			
EXHAUST PRESSURE	PSIG	BEARINGS - RADIAL, TYPE																			
PSIA	" "	THRUST TYPE																			
HP ABS.	" "	BEARING SEALS OR CLOSURES, TYPE																			
STEAM RATE AT TURBINE RATING - LB/HR	8.8	LUBRICATION - RADIAL																			
1/2 RATING - LB/HR	9.8	(PRESSURE) THRUST																			
FRICITION HP	" "	OIL LEVEL INDICATOR																			
HAND VALVES REQ'D.	1	AUXILIARY OIL PUMP REQ'D																			
MAX HP WITH 1 VALVE CLOSED	950 HP @ 5100 RPM	OIL COOLER																			
" " " 2 VALVES	" "	BEARING HOUSINGS WATER COOLED																			
" " " 3 VALVES	" "	TOTAL COOLING WATER REQ'D (INCL. GEAR)																			
CAPABILITY AND LIMITS. MAXIMUM HP 2800 HP		CASE INSULATION - TYPE																			
OBTAINABLE WITH NEW NOZZLES ETC FOR FIELD INSTALL		PROTECTIVE JACKET																			
MAX HP LIMITED BY NOZZLES (LOADING) OR CAP MECHAN		BASIC PRICE DATA																			
MAX. NO. OF HAND VALVES AVAILABLE		BID PRICE, TURBINE AS SPECIFIED, EACH																			
MAX. RATING OF STEAM CHEST		PRICE OF GEAR UNIT & COUPLINGS																			
MAX. EXHAUST PRESSURE ON CASE		PRICE OF																			
MAX. ALLOWABLE SPEED		CHARGES INCLUDED IN ABOVE FOR HAND VALVES																			
GOVERNOR, TYPE (MECH) (RELAY) (HYDRA) (MAG) (E) (C)		CHARGES INCL. FOR SPECIAL GOV & CONTROLS																			
N.E.M.A. CLASS (IF CLASS A, MAX. REGULATION %)		" " " FLANGE FAGING OTHER THAN RF																			
OVERSPEED TRIP SET AT: (% ABOVE NORMAL)		" " " OTHER. (EXPLAIN)																			
SPEED ADJ. WHILE RUNNING - (% ABOVE NORMAL)		EXTRAS NOT INCLUDED. - OPTIONAL																			
(% BELOW NORMAL)		CERTIFIED PERFORMANCE DATA (NO WITNESS)																			
TYPE OF SPEED CHANGER (MANUAL) (ELECT) (PNEUMATIC)		WITNESS TESTS & CERTIFIED DATA																			
AUXILIARY PRESSURE (PNEUMATIC) GOVERNOR		OTHER (EXPLAIN)																			
RPM AT 3 PSI / RPM @ 13 PSI		WEIGHTS - TURBINE & ACCESSORIES																			
CONNECTIONS:		GEAR & COUPLING																			
STEAM INLET		BASE																			
RATING & FACING		TOTAL SHIPPING WT.																			
EXHAUST		TOTAL PRICE INCL. SPEC. EXTRAS																			
RATING & FACING		(FOB) (FAS) (FAT ALLOWED)																			
DRAINS - (1/2" MIN.)		SHIPMENT - WKS FROM RCPT OF ORDER																			
GEAR (IF SUPPLIED) - MAKE		POINTS OF SHIPMENT.																			
TYPE & SIZE																					
INTEGRAL OR COUPLED																					
RATED HP OF GEAR - MECH/THERMAL																					
GEAR RATIO / SINGLE OR DOUBLE REDUCTION																					
OUTPUT SPEED																					
ROTATION OF OUTPUT SHAFT (VIEWED FROM TURB)																					
GEAR LUBRICATION (SELF) (TURB. SYSTEM) (ETC)																					
COUPLING, GEAR TO TURBINE, TYPE																					
TEST & INSPECTION - (MFRS STD TESTS REQ'D)																					
INSPECTION BY PURCHASER																					
CERTIFIED PERFORMANCE DATA REQ'D.																					
WITNESS PERFORMANCE TEST REQ'D.																					
REV. 11/10/65																					
CHANGES FROM 11/10/65 TO 2888 REV. 11/10/65																					
ISSUED FOR CONSTRUCTION																					
CONTINENTAL OIL COMPANY																					
1000 T/D AMMONIA PLANT																					
BLYTHEVILLE, ARKANSAS																					
JOB NO. 4915																					
REV. DS-1KT-301																					

FORM 131 REV. 4-22-1965

