

APPENDIX A—GENERAL PURPOSE STEAM TURBINE DATA SHEETS

GENERAL-PURPOSE STEAM TURBINE DATA SHEET SI UNITS

JOB NO. _____ ITEM NO. _____
 PURCHASE ORDER NO. _____
 SPECIFICATION NO. _____
 REVISION NO. _____ DATE _____
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1	APPLICABLE TO: <input type="radio"/> PROPOSAL <input type="radio"/> PURCHASE <input type="radio"/> AS BUILT				
2	FOR _____		UNIT _____		
3	SITE _____		NO. REQUIRED _____		
4	SERVICE _____		DRIVEN EQUIPMENT _____		
5	MANUFACTURER _____		MODEL _____		SERIAL NO. _____
6	NOTE: <input type="radio"/> INDICATES INFORMATION COMPLETED BY PURCHASER <input type="checkbox"/> BY MANUFACTURER <input checked="" type="checkbox"/> BY MFGR IF NOT BY PURCHASER				
7	<input type="radio"/> OPERATING CONDITIONS		<input type="checkbox"/> PERFORMANCE		
8		POWER, kW	SPEED, RPM	OPERATING POINT/ STEAM CONDITION	NO. HAND VALVES OPEN (5.4.1.4)
9	OPERATING POINT				STEAM RATE, kg/kW-HR
10	NORMAL			NORMAL/NORMAL (CERTIFIED SR)	
11					
12	RATED			RATED/NORMAL	
13	OTHER (4.1.4)			(1) MIN. INLET - MAX EXHAUST	
14	<input type="radio"/> DUTY, SITE AND UTILITY DATA		(1) <input type="radio"/> RATED <input type="radio"/> _____% RATED <input type="radio"/> NORMAL (4.1.4)		
15	APPLICATION IS (SPARED, UNSPARED) _____				
16	<input type="radio"/> WIDE SPEED RANGE <input type="radio"/> RAPID START		APPLICABLE SPECIFICATION		
17	<input type="radio"/> SLOW ROLL REQ. (4.10.4) <input type="radio"/> HAND VALVES REQ. (5.4.1.5)		API-611 OTHER _____		
18	DUTY <input type="radio"/> CONTINUOUS <input type="radio"/> STANDBY				
19	<input type="radio"/> UNATTENDED AUTO START (4.1.6)				
20	LOCATION (4.1.14)	<input type="radio"/> INDOOR <input type="radio"/> HEATED <input type="radio"/> UNHEATED	TURBINE TYPE <input type="radio"/> HORIZ <input type="radio"/> VERTICAL		
21		<input type="radio"/> OUTDOOR <input type="radio"/> ROOF <input type="radio"/> W/O ROOF	NO STAGES _____ WHEEL DIA., mm		
22	AMBIENT TEMP., °C:	MIN. _____ MAX _____	ROTOR: <input type="checkbox"/> BUILT UP <input type="checkbox"/> SOLID <input type="checkbox"/> OVERHUNG		
23	UNUSUAL CONDITIONS	<input type="radio"/> DUST <input type="radio"/> SALT ATMOSPHERE	<input type="checkbox"/> BETWEEN BRGS		
24	(4.1.14)	<input type="radio"/> OTHER _____	BLADING <input type="checkbox"/> 2 ROW <input type="checkbox"/> 3 ROW <input type="checkbox"/> RE-ENTRY		
25	ELECT. AREA (4.1.13) CLASS _____	GROUP _____ DIV _____	CASING SPLIT <input type="checkbox"/> AXIAL <input type="checkbox"/> RADIAL		
26		<input type="radio"/> NON-HAZARDOUS	CASING SUPPORT <input type="checkbox"/> CENTERLINE <input type="checkbox"/> FOOT		
27	CONTROL POWER	V _____ PH. _____ HZ _____	<input type="radio"/> VERT. JACKSCREWS (4.2.13)		
28	AUX. MOTORS	V _____ PH. _____ HZ _____	VERTICAL TURBINE FLANGE		
29	COOLING WATER:	PRESS, BARG _____ Δ P, PSI _____	<input type="radio"/> NEMA "P" BASE <input type="radio"/> OTHER (4.4.9) _____		
30		FLOW, m ³ /hr _____ Δ T, °C: _____	TRIP VALVE <input type="checkbox"/> INTEGRAL <input type="checkbox"/> SEPARATE		
31	ALLOW. SOUND PRESS LEVEL (4.1.12)	_____ dBA @ _____ m	INTERSTAGE SEALS <input type="checkbox"/> LABYRINTH <input type="checkbox"/> CARBON		
32	<input type="radio"/> STEAM CONDITIONS		END SEALS <input type="checkbox"/> CARBON RING, NO/BOX _____		
33		MAX NORMAL MIN.	<input type="checkbox"/> LABYRINTH <input type="checkbox"/> MATERIAL _____		
34	INLET PRESS, (BARG)(kPa G)		<input type="checkbox"/> MECHANICAL <input type="checkbox"/> MFB _____		
35	INLET TEMP, °C		TYPE RADIAL BEARINGS (4.9.1) _____		
36	EXHAUST PRESS (BARG) (mmHGA)		TYPE THRUST BEARING (4.9.2) _____		
37	<input type="radio"/> STEAM CONTAMINANTS (4.11.1.7)		<input type="checkbox"/> CALCULATED THRUST LOAD _____ BAR (4.9.15)		
38	TURBINE DATA		<input type="checkbox"/> BEARING MFGR'S ULTIMATE RATING _____ BAR		
39	<input type="checkbox"/> ALLOW SPEEDS, RPM, MAX _____ MIN _____		THRUST COLLAR (4.9.10.2) <input type="checkbox"/> REPLACEABLE <input type="checkbox"/> INTEGRAL <input type="checkbox"/> NONE		
40	<input type="checkbox"/> MAX CONT SPEED, RPM (3.1.10)		<input checked="" type="radio"/> LUBE OIL VISCOSITY (4.10.3) ISO GRADE _____		
41	<input type="checkbox"/> TRIP SPEED, RPM _____	BLADE TIP VEL, mm/s _____	LUBRICATION <input type="radio"/> RING OILED <input type="radio"/> PRESSURE <input type="radio"/> GREASE		
42	<input type="checkbox"/> FIRST CRITICAL SPEED, RPM (4.8.2.1)		OIL MIST (4.9.19)		
43	<input type="checkbox"/> EXH. TEMP °C _____	NORMAL _____ NO LOAD _____	<input type="radio"/> PURGE OIL MIST <input type="radio"/> PURE OIL MIST		
44	<input type="checkbox"/> POTENTIAL MAX POWER, KW (3.1.20)		<input type="radio"/> BEARING HOUSING OILER TYPE _____		
45	<input type="checkbox"/> MAX. NOZZLE STEAM FLOW, kg/hr		CASING DESIGN INLET EXHAUST		
46	ROTATION FACING GOVERNOR END	<input type="radio"/> CCW <input type="radio"/> CW	MAX. ALLOW. PRESS, BARG		
47	<input type="radio"/> DRIVEN EQUIPMENT THRUST, N (4.9.11)		MAX ALLOW. TEMP, °C		
48	(VERTICAL TURBINE) (4.9.3)		HYDRO TEST PRESS., BARG		
49	<input type="radio"/> WATER PIPING FURN. BY	<input type="radio"/> VENDOR <input type="radio"/> OTHERS			
50	<input type="radio"/> OIL PIPING FURN. BY	<input type="radio"/> VENDOR <input type="radio"/> OTHERS			

GENERAL-PURPOSE STEAM TURBINE DATA SHEET SI UNITS

JOB NO. _____ ITEM NO. _____
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1	<input type="checkbox"/> MATERIALS					<input type="radio"/> ACCESSORY EQUIPMENT BY VENDOR				
2	HIGH PRESSURE CASING _____	GRADE _____				<input type="radio"/> REMOTE TRIP	<input type="radio"/> SOLENOID			
3	EXHAUST CASING _____	GRADE _____				<input type="checkbox"/> VACUUM BREAKER (5.4.2.9)				
4	NOZZLES _____	GRADE _____				<input type="radio"/> AUTOMATIC STEAM SEALING SYSTEM (4.7.5)				
5	BLADING _____	GRADE _____				GLAND VACUUM DEVICE WITH: (4.7.4)				
6	WHEELS _____	GRADE _____				<input type="radio"/> WATER EDUCTOR	<input type="radio"/> STEAM EJECTOR			
7	SHAFT _____	GRADE _____				<input type="radio"/> SENTINEL WARNING VALVE (5.4.5.2)				
8	<input checked="" type="checkbox"/> SHAFT COATING UNDER PACKING (4.6.2.3)					<input type="checkbox"/> INSULATION, TYPE: _____				
9	MATERIAL _____				<input type="radio"/> TACHOMETER (5.4.4.1), TYPE _____					
10	APPLICATION METHOD _____				<input checked="" type="checkbox"/> MFR. _____	<input checked="" type="checkbox"/> MODEL _____				
11	THICKNESS _____				<input type="radio"/> MOUNTED BY _____					
12	GOV. VALVE TRIM _____				<input type="radio"/> THERMAL RELIEF VALVES (5.4.4.7.3)					
13	INLET STRAINER _____	MESH SIZE _____				<input type="radio"/> SHUTOFF VALVES FOR SHUTDOWN SENSORS				
14	COUPLING SPACER/HUBS _____				<input type="radio"/> LOCAL GAUGE BOARD WITH FOLLOWING PRESSURE GAUGES: (5.4.3.1)					
15	COUPLING DIAPHRAGMS (DISKS) _____				<input type="radio"/> THROTTLE STEAM	<input type="radio"/> FIRST STAGE				
16	STEAM CONTROL					<input type="radio"/> NOZZLE RING	<input type="radio"/> EXHAUST			
17	SPEED CHANGER <input type="radio"/> MANUAL <input type="radio"/> PNEUM. <input type="radio"/> ELECT (5.4.2.3)				<input type="radio"/> LIQUID FILLED GAUGES (5.4.4.4)					
18	MFR. _____	MODEL _____				<input type="radio"/> INSTRUMENT PANEL (5.4.3.2.1)				
19	CONTROLLED	OPERATING	CONTROL							
20	VARIABLE	RANGE	SIGNAL							
21	SPEED _____	TO _____ RPM 1/2 mA	TO _____	BARG/mA	EXTERNAL LUBE OIL SYSTEM					
22	_____	TO _____ RPM 1/2 mA	TO _____	BARG/mA	<input type="checkbox"/> CIRCULATING (4.10.5)	<input checked="" type="checkbox"/> PRESSURE (4.10.6)				
23	<input type="checkbox"/> CONNECTIONS (4.4.1)					VENDOR FURNISH SYSTEM FOR: <input type="radio"/> TURBINE				
24	SIZE	RATG	FAC'G	POS.	<input type="radio"/> MATING PARTS					
25					FURNISHED (4.4.6.5)					
26	INLET				OIL SYSTEM TO BE: <input type="radio"/> CONSOLE TYPE					
27	EXHAUST				<input type="radio"/> MOUNTED ON BASEPLATE					
28	DRAINS				OIL SYSTEM TO INCLUDE FOLLOWING EQUIPMENT: (4.10.5)(4.10.7)					
29					<input checked="" type="checkbox"/> STANDBY OIL PUMP: _____	TYPE DRIVER _____				
30					<input type="radio"/> LOW OIL PRESS ALARM SWITCH					
31	COUPLINGS (5.2) <input type="radio"/> SEE SEPARATE DATA SHEET					<input type="radio"/> LOW OIL PRESS TRIP SWITCH				
32	LOCATION		TURBINE	DRIVEN	<input type="radio"/> HEATER (4.10.8) <input type="radio"/> ELECTRIC <input type="radio"/> STEAM					
33	<input type="radio"/> MAKE				<input type="radio"/> OIL DRAIN SIGHT FLOW INDICATORS					
34	<input checked="" type="checkbox"/> MODEL				<input type="checkbox"/> HAND OPERATED STANDBY PUMP					
35	<input type="checkbox"/> RATING (HP/100RPM)									
36	<input type="radio"/> LUBRICATION									
37	<input checked="" type="checkbox"/> LIMITED END FLOAT									
38	<input type="checkbox"/> SPACER LENGTH									
39	<input checked="" type="checkbox"/> SERVICE FACTOR									
40	<input type="radio"/> TURBINE VENDOR MOUNTS HALF COUPLING									
41										
42	DYN. BALANCE CL (5.2.8)									
43	<input type="radio"/> AGMA CLASS 8 <input type="radio"/> OTHER _____									
44	TURBINE SHAFT <input type="checkbox"/> TAPER <input type="checkbox"/> STRAT <input type="checkbox"/> HYDRAULIC FIT HUB									
45	<input type="radio"/> MOUNTING PLATES					VIBRATION AND POSITION DETECTORS (5.4.6)				
46	TYPE: (5.3.1.1) <input type="radio"/> BASEPLATE <input type="radio"/> SOLEPLATE				<input type="radio"/> FURNISH PROVISIONS FOR MOUNTING NON-CONTACTING VIBRATION PROBES (4.9.32)					
47	FURN. BY: <input type="radio"/> TURBINE VENDOR				<input type="radio"/> FURN. AXIAL POSITION PROBES <input checked="" type="checkbox"/> NO. OF PROBES _____					
48	<input type="radio"/> DRIVEN EQUIPMENT VENDOR <input type="radio"/> OTHER _____				<input checked="" type="checkbox"/> MFR. _____ <input checked="" type="checkbox"/> MODEL _____					
49	EQUIPMENT TO BE MOUNTED: (5.3.2.1)				<input type="radio"/> FURN. RADIAL PROBES <input type="radio"/> NO. OF PROBES PER BEARING _____					
50	<input type="radio"/> TURBINE <input type="radio"/> GENERATOR <input type="radio"/> GEAR				<input checked="" type="checkbox"/> MFR. _____ <input checked="" type="checkbox"/> MODEL _____					
51	<input type="radio"/> PUMP <input type="radio"/> OTHER _____				FURNISH BEARING METAL TEMP SENSORS FOR:					
52	<input type="radio"/> UNGROUTED BASEPLATE (5.3.2.4)				<input type="radio"/> RADIAL BEARINGS <input type="radio"/> THRUST BEARINGS					
53	<input type="radio"/> SUITABLE FOR COLUMN MOUNTING				TURBINE VENDOR SUPPLIES AND CALIBRATES MONITORS FOR:					
54	<input type="radio"/> TURBINE VENDOR FURNISHES SUBPLATES				<input type="radio"/> AXIAL AND RADIAL PROBES					
					<input type="radio"/> BEARING TEMPERATURE SENSORS					
					<input type="radio"/> SEE SEPARATE DATA SHEETS FOR DETAILS					

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1	ENGINEERING REQUIREMENTS	<input type="radio"/> PREPARATION FOR SHIPMENT						
2	<input type="radio"/> SUPPLY ENGR. DATA FOR LATERAL/TORSIONAL ANALYSES (4.8.1.7)	TURBINE AUX. EQUIPMENT AND SPARE ROTOR PREPARED FOR (6.4.1): <input type="radio"/> DOMESTIC SHIPMENT <input type="radio"/> EXPORT SHIPMENT REMARKS: _____ _____ _____ _____						
3	<input type="radio"/> CALCS AND/OR DATA FOR SEPARATION MARGIN (4.8.2.2)							
4	<input type="radio"/> TRAIN TORSIONAL VIBRATION ANALYSIS (4.8.3.5)							
5	<input type="radio"/> WEIGHT OF HALF KEYS (4.8.4.2)							
6	<input type="radio"/> RESIDUAL UNBALANCE CHECK (4.8.4.3)							
7	REMARKS: _____							
8	_____							
9	_____							
10	REMARKS: _____							
11	_____							
12	TESTS (6.3)	REQ'D.	WITN.	OBSVD. (6.1.5)				
13	HYDROSTATIC (6.3.2.1)	●	○	○				
14	MECH. RUN (6.3.3)	●	○	○				
15		○	○	○				
16	PERFORMANCE (6.3.4.1)	○	○	○				
17	INSPECTION REQUIREMENTS	○	○	○				
18	<input type="radio"/> 100% ULTRASONIC INSPECTION AFTER ROUGH MACHINING (6.2.2.3.1)	○	○	○				
19	<input type="radio"/> USE INSPECTOR'S CHECK LIST	○	○	○				
20	CASTING SURFACE INSPECTION (6.2.2.1.1) <input type="radio"/> MSS SP-55	○	○	○				
21	<input type="radio"/> OTHER _____	○	○	○				
22	<input type="radio"/> WELD INSPECTION (6.2.2.1.2)	○	○	○				
23	SPECIAL NDT INSPECTION (6.2.1.3)	○	○	○				
24	REMARKS: _____	○	○	○				
25	_____	○	○	○				
26		WEIGHTS						
27	COMPONENT	MAG. PART.	DYE PENET.	RADIO-GRAPHIC	ULTRA-SONIC	OBSE-RVED	WITN.	<input type="checkbox"/> TURBINE _____ kg
28	T&T VALVE					○	○	<input type="checkbox"/> ROTOR _____ kg
29	STM CHEST					○	○	<input type="checkbox"/> TURBINE UPPER HALF CASING _____ kg
30	CASING					○	○	<input type="checkbox"/> MAX MAINTENANCE (IDENTIFY) _____ kg
31	PIPING					○	○	<input type="checkbox"/> T & T VALVE _____ kg
32	ROTOR					○	○	<input type="checkbox"/> BASEPLATE _____ kg
33						○	○	<input type="checkbox"/> MISC. _____ kg
34						○	○	<input type="checkbox"/> TOTAL SHIPPING WEIGHT _____ kg
35								REMARKS: _____
36								_____
37	REMARKS: _____							_____
38	_____							_____
39	_____							_____
40	_____							_____
41	_____							_____
42	_____							_____
43	_____							_____
44	_____							_____
45	_____							_____
46	_____							_____
47	_____							_____
48	_____							_____
49	_____							_____
50	_____							_____
51	_____							_____

GENERAL-PURPOSE STEAM TURBINE DATA SHEET U.S. CUSTOMARY UNITS

JOB NO. _____ ITEM NO. _____
 REVISION NO. _____ DATE _____
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1	<input type="checkbox"/> MATERIALS					<input type="radio"/> ACCESSORY EQUIPMENT BY VENDOR				
2	HIGH PRESSURE CASING _____		GRADE _____		<input type="radio"/> REMOTE TRIP <input type="radio"/> SOLENOID					
3	EXHAUST CASING _____		GRADE _____		<input type="checkbox"/> VACUUM BREAKER (5.4.2.9)					
4	NOZZLES _____		GRADE _____		<input type="radio"/> AUTOMATIC STEAM SEALING SYSTEM (4.7.5)					
5	BLADING _____		GRADE _____		GLAND VACUUM DEVICE WITH: (4.7.4)					
6	WHEELS _____		GRADE _____		<input type="radio"/> WATER EDUCTOR <input type="radio"/> STEAM EJECTOR					
7	SHAFT _____		GRADE _____		<input type="radio"/> SENTINEL WARNING VALVE (5.4.5.2)					
8	<input checked="" type="checkbox"/> SHAFT COATING UNDER PACKING (4.6.2.3)					<input type="checkbox"/> INSULATION, TYPE: _____				
9	MATERIAL _____					<input type="radio"/> TACHOMETER (5.4.4.1), TYPE _____				
10	APPLICATION METHOD _____					<input checked="" type="checkbox"/> MFR. _____ <input checked="" type="checkbox"/> MODEL _____				
11	THICKNESS _____					<input type="radio"/> MOUNTED BY _____				
12	GOV. VALVE TRIM _____					<input type="radio"/> THERMAL RELIEF VALVES (5.4.4.7.3)				
13	INLET STRAINER _____		MESH SIZE _____		<input type="radio"/> SHUTOFF VALVES FOR SHUTDOWN SENSORS					
14	COUPLING SPACER/HUBS _____					<input type="radio"/> LOCAL GAUGE BOARD WITH FOLLOWING PRESSURE GAUGES: (5.4.3.1)				
15	COUPLING DIAPHRAGMS (DISKS) _____					<input type="radio"/> THROTTLE STEAM <input type="radio"/> FIRST STAGE				
16	STEAM CONTROL					<input type="radio"/> NOZZLE RING <input type="radio"/> EXHAUST				
17	SPEED CHANGER <input type="radio"/> MANUAL <input type="radio"/> PNEUM. <input type="radio"/> ELECT (5.4.2.3)					<input type="radio"/> LIQUID FILLED GAUGES (5.4.4.4)				
18	MFR. _____ MODEL _____					<input type="radio"/> INSTRUMENT PANEL (5.4.3.2.1)				
19	CONTROLLED VARIABLE		OPERATING RANGE		CONTROL SIGNAL					
20										
21	SPEED _____		_____ TO _____ RPM		_____ TO _____ PSIG/MA					
22										
23	<input type="checkbox"/> CONNECTIONS (4.4.1)					EXTERNAL LUBE OIL SYSTEM				
24		SIZE	RAT'G	FAC'G	POS.	<input type="checkbox"/> CIRCULATING (4.10.5) <input checked="" type="checkbox"/> PRESSURE (4.10.6)				
25						VENDOR FURNISH SYSTEM FOR: <input type="radio"/> TURBINE				
26	INLET					<input type="radio"/> OTHER _____				
27	EXHAUST					OIL SYSTEM TO BE: <input type="radio"/> CONSOLE TYPE				
28	DRAINS					<input type="radio"/> MOUNTED ON BASEPLATE				
29						OIL SYSTEM TO INCLUDE FOLLOWING EQUIPMENT: (4.10.5)(4.10.7)				
30						<input checked="" type="checkbox"/> STANDBY OIL PUMP: _____ TYPE DRIVER _____				
31	COUPLINGS (5.2) <input type="radio"/> SEE SEPARATE DATA SHEET					<input type="radio"/> LOW OIL PRESS ALARM SWITCH				
32	LOCATION		TURBINE		DRIVEN					
33	<input type="radio"/> MAKE									
34	<input checked="" type="checkbox"/> MODEL									
35	<input type="checkbox"/> RATING (HP/100RPM)									
36	<input type="radio"/> LUBRICATION									
37	<input checked="" type="checkbox"/> LIMITED END FLOAT									
38	<input type="checkbox"/> SPACER LENGTH									
39	<input checked="" type="checkbox"/> SERVICE FACTOR									
40	<input type="radio"/> TURBINE VENDOR MOUNTS HALF COUPLING									
41										
42	DYN. BALANCE CL (5.2.8)					<input type="radio"/> FURN. AXIAL POSITION PROBES <input checked="" type="checkbox"/> NO. OF PROBES _____				
43	<input type="radio"/> AGMA CLASS 8 <input type="radio"/> OTHER _____					<input checked="" type="checkbox"/> MFR. _____ <input checked="" type="checkbox"/> MODEL _____				
44	TURBINE SHAFT <input type="checkbox"/> TAPER <input type="checkbox"/> STRAT <input type="checkbox"/> HYDRAULIC FIT HUB					<input type="radio"/> FURN. RADIAL PROBES <input type="radio"/> NO. OF PROBES PER BEARING _____				
45	<input type="radio"/> MOUNTING PLATES					<input checked="" type="checkbox"/> MFR. _____ <input checked="" type="checkbox"/> MODEL _____				
46	TYPE: (5.3.1.1) <input type="radio"/> BASEPLATE <input type="radio"/> SOLEPLATE					FURNISH BEARING METAL TEMP SENSORS FOR:				
47	FURN. BY: <input type="radio"/> TURBINE VENDOR					<input type="radio"/> RADIAL BEARINGS <input type="radio"/> THRUST BEARINGS				
48	<input type="radio"/> DRIVEN EQUIPMENT VENDOR <input type="radio"/> OTHER _____					TURBINE VENDOR SUPPLIES AND CALIBRATES MONITORS FOR:				
49	EQUIPMENT TO BE MOUNTED: (5.3.2.1)					<input type="radio"/> AXIAL AND RADIAL PROBES				
50	<input type="radio"/> TURBINE <input type="radio"/> GENERATOR <input type="radio"/> GEAR					<input type="radio"/> BEARING TEMPERATURE SENSORS				
51	<input type="radio"/> PUMP <input type="radio"/> OTHER _____					<input type="radio"/> SEE SEPARATE DATA SHEETS FOR DETAILS				
52	<input type="radio"/> UNGROUTED BASEPLATE (5.3.2.4)									
53	<input type="radio"/> SUITABLE FOR COLUMN MOUNTING									
54	<input type="radio"/> TURBINE VENDOR FURNISHES SUBPLATES									

