

**IRANIAN PETROLEUM STANDARDS  
A10-QUOTATION ANALYSIS REPORT TABLE  
FOR TURBO-EXPANDER**

ISSUE DATE      PAGE    OF    REV.  
PREP'D.----- CHE'D.      ----- APP'D.      -----

OPERATING CONDITION	DATA	<b>QUOTATION ANALYSIS REPORT FOR TURBO-EXPANDER</b>  PROJECT: ----- CLIENT: ----- LOCATION: ----- UNIT No: ----- ITEM No: ----- SERVICE: -----	SITE CONDITION			
FLUID:			Range of ambient Temps.:Max./Min.	/	°C	
INLET RATED TEMP. FOR EXP.	°C		Altitude		m	
FOR COMP.	°C		Relative Humidity: Max./Min.	/	(%)	
FLOW. RATE@ EXP.	kg/h		Unusual Condition	<input type="radio"/> Dust	<input type="radio"/> Fumes	
@ COMP.			Chloride Concentration		ppm	
SPECIFIC GRAVITY FOR EXP.	kg/ m <sup>3</sup>		Elect. Area Classification	Cl	GR	DIV
FOR COMP.	kg/ m <sup>3</sup>		<input type="radio"/> Winterization	<input type="radio"/> Req'd.	<input type="radio"/> Not Req'd.	
RATED OUTLET PRESS. FOR EXP.	MPa(ga)		<input type="radio"/> Tropicalization	<input type="radio"/> Req'd.	<input type="radio"/> Not Req'd.	
FOR COMP.	MPa(ga)		Others			
CALCULATED HYDRAULIC POWER	kW	REMARKS:				
OTHERS:						

DESCRIPTION (Spec.)	DATA	VENDOR'S PROPOSAL								
		A			B			C		
MANUFACTURER										
TYPE:										
MODEL	<input type="radio"/> HORIZ. <input type="radio"/> VERT.	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
NO.OF STAGES FOR EXP.										
FOR COMP.										
ROTATION	<input type="radio"/> cw <input type="radio"/> ccw	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
SHAFT SPEED	rpm									
1 <sup>ST</sup> , 2 <sup>ND</sup> , 3 <sup>RD</sup> , CRITICAL SPEED										
MAX. CONTINUOUS SPEED										
CASE SPLIT	<input type="radio"/> RADIAL <input type="radio"/> AXIAL	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
NOZZLE: SUC. FOR EXP.; SIZE, RATING, FACE & LOC.										
NOZZLE: SUC. FOR COMP.; SIZE, RATING, FACE & LOC.										
NOZZLE: DIS. FOR EXP.; SIZE, RATING, FACE & LOC.										
NOZZLE: DIS. FOR COMP.; SIZE, RATING, FACE & LOC.										
ADIABATIC EFF. FOR EXP.										
POLYTROPIC EFF. FOR COMP.										
B.H.P. : RATED	kW									
MAX.	kW									
ESTIMATED POWER OBSERVED	kW									
INLET PRESS. RATED	MPa									
MAX.	Mpa									
MIN.	Mpa									
OUTLET PRESS. RATED	Mpa									
MAX.	Mpa									
MIN.	Mpa									
INLET FLOW RATED	kg/h									
MAX.	kg/h									
MIN.	kg/h									
OUTLET FLOW RATED	kg/h									
MAX.	kg/h									
MIN.	kg/h									
MAX.ALLOW. WORK. PRESS. TEMP.	Mpa(ga) °C									
HYDRO. TEST PRESS.(at 15°C)	Mpa(ga)									
MIN. SHAFT DIAMETER - EXP.										
COMP.										
CASING DRAIN CONN. PROVIDE WITH VALVE & FLANGE	<input type="radio"/> REQUIRED <input type="radio"/> NOT REQUIRED									
CASING VENT CONN. PROVIDE WITH VALVE & FLANGE	<input type="radio"/> REQUIRED <input type="radio"/> NOT REQUIRED									
OTHERS:										
<b>IMPELLER:</b>										
TYPE	<input type="radio"/> OPEN <input type="radio"/> CLOSE	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
	<input type="radio"/> S.SUCTION <input type="radio"/> D.SUCTION	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
IMPELLER DIA. FOR EXP.: /MAX. / RATED	mm      mm									
IMPELLER DIA. FOR COMP.:MAX. / RATED	mm      mm									
MAX. IMP. TIP SPEED - EXP.	m/s									
COMP.										
OTHERS:										
<b>BEARING &amp; LUBRICATION SYSTEM</b>										
LUBRICATION SYSTEM'S STANDARD	<input type="radio"/> IPS <input type="radio"/> MAUFACTURER	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
BEARING TYPE:	<input type="radio"/> MAGNETIC <input type="radio"/> SLEEVE	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
	<input type="radio"/> HYD.DYNAMIC <input type="radio"/> TILT-PAD									
AXIAL. THRUST LOAD										
THRUST COLLAR	<input type="radio"/> INTEGRAL <input type="radio"/> REPLACEABLE	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
BEARING TEMP. DEVICES	<input type="checkbox"/> THERMOCOUPLE <input type="checkbox"/> RTD	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
NO.PER BRG. ( RADIAL/ THRUST)										
OTHERS:										

**IRANIAN PETROLEUM STANDARDS  
A10-QUOTATION ANALYSIS REPORT TABLE  
FOR TURBO-EXPANDER  
(CONTINUED)**

DESCRIPTION (Spec.)	DATA	VENDOR'S PROPOSAL								
		A			B			C		
<b>BASEPLATE:</b>										
TYPE:	<input type="radio"/> COMMON <input type="radio"/> STEEL FABR. <input type="radio"/> HEAVY- DUTY	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
WITH AIR VENT HOLES	<input type="radio"/> REQUIRED <input type="radio"/> NOT REQUIRED	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
DRAIN CONNECTION	<input type="radio"/> REQUIRED <input type="radio"/> NOT REQUIRED	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
OTHERS:										
<b>NOISE:</b>										
LEVEL	MAX. db(abs.)									
STANDARD:										
OTHERS:										
<b>SHAFT SEAL</b>										
TYPE	<input type="radio"/> DRY GAS <input type="radio"/> OIL FILM <input type="radio"/> MECHANICAL <input type="radio"/> OTHER -----	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A
SETTING OUT PRESSURE	Mpa(abs)									
OTHERS:										
<b>MATERIALS:</b>										
EXP. IMPELLER/COMP. IMPELLER	/									
CASING / IMPELLER	/									
IMPELLER LAB. SEAL / CASE LAB. SEAL	/									
SHAFT / SHAFT SLEEVE	/									
OTHERS:										
<b>VIB.DEVICE</b>										
BALANCE REF. INDICATOR (PHASE ANGLE)	<input type="radio"/> REQUIRED <input type="radio"/> NOT REQUIRED									
AXIAL MOVEMENT INDICATOR	<input type="radio"/> REQUIRED <input type="radio"/> NOT REQUIRED									
BALANCE REF. INDICATOR (PHASE ANGLE)										
DEVIATIONS FROM IPS STD.										
REMARKS:										
<b>TEST AND INSPECTION</b>										
EVALUATION RANKING	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D									
TOTAL PRICE	IN USD \$									
DELIVERY (EX. FACTORY)										
REMARKS:										
COMMENTS:										