



**AXH air-coolers**  
air-x-limited

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**Proposal / Job No.** 128560E  
**Date** 1/7/2013  
**Page** 1 OF 1

1	<b>Purchaser</b>	AURORA ENGINEERING	<b>Ultimate User</b>	PENN WEST PETROLEUM	
2	<b>Inquiry / PO#</b>	RFQ 126020-001 / PO AUR-A12110144-001	<b>Destination</b>	ALBERTA	
3	<b># Units</b>	1	<b>Model</b>	84BZF	<b>Reference</b>
4	<b>Assembly</b>	PACKAGED	<b>Draft</b>	FORCED	<b>Overall Size, Ft</b> 8'W x 12'L
					<b>Est Wt</b> 7,000 LBS

**THERMAL & MECHANICAL DESIGN**

5	<b>Service</b>	WATER **			
6	<b>Flow</b>	21030#/HR			
7	<b>Fluid</b>	WATER			
8	<b>Temp. In / Out, °F</b>	167.0 / 86.0			
9	<b>Pressure, PSI</b>	77PSIG			
10	<b>Pressure Drop, PSI</b>	4.7			
11	<b>Heat Load, BTU/HR</b>	1703430			
12	<b>True LMTD</b>	22.9			
13	<b>Overall Rate, U</b>	155.1			
14	<b>Fouling Factor</b>	.0005			
15	<b>Surface, Tube / Total, Sq Ft</b>	481 / 7642			
16	<b>Sections, #</b>	(1)			
17	<b>Design Temp, °F Max / Min</b>	300 / -49			
18	<b>MWP / Test Press, PSIG</b>	284 / 370			
19	<b>Pass Arrangement</b>	CROSSFLOW			
20	<b># Tube Rows</b>	4			
21	<b># Tube Passes</b>	8			
22	<b>Tubes, OD x BWG</b>	5/8X14			
23	<b>Material</b>	SA214 STEEL			
24	<b># Per Section / Length, Ft</b>	250 / 12			
25	<b>Turbulators</b>				
26	<b>Accelerators</b>				
27	<b>Fins, Type</b>	HI-EFF			
28	<b>Material</b>	AL			
29	<b>Nozzles, Rating / Type</b>	300RF			
30	<b>Material</b>	SA350LF2			
31	<b>#-Inlets / Size In</b>	(1) 2			
32	<b>#-Outlets / Size In</b>	(1) 2			
33	<b>Headers, Type</b>	BOX			
34	<b>Material</b>	SA516-70N			
35	<b>Corrosion Allow, In</b>	.1250			
36	<b>Grooved Tubesheet</b>	DBL			
37	<b>Plugs, Type</b>	SHOULDER			
38	<b>Plugs Material</b>	SA350LF2			
39	<b>PWHT</b>	YES			
40	<b>ASME Code &amp; Nat'l Board</b>	YES			
41	<b>CRN</b>	ALBERTA			
42	<b>Add'l Specs &amp; Options</b>				
43	<b>API</b>	661 *			
44	<b>Louvers / Hail Screen</b>	MAN / INT			
45	<b>Inspection / NDT</b>	BX / UT			

**FX=** 100% X-Ray of all header seam, attachment & nozzle butt welds. **SX=** Spot X-Ray of 1 long seam & 1 end closure, per header  
**BX=** 100% X-Ray of all nozzle butt welds. **UT =** 100% UT of all header seam, attachment & nozzle butt welds. **H =** Hardness testing.

AIR-SIDE PERFORMANCE		FAN DATA		DRIVER DATA		STRUCTURAL	
46	<b>Ambient Air Temp, In °F</b>	77	<b>Fan</b>	1) MOORE-10KVT-S30	<b>Type</b>	<b>Guards</b>	FAN / DRIVE
47	<b>Elevation, Ft</b>	2500	<b>Blade Material</b>	ALUMINUM	V-BELT DRIVE BY (1) 15HP,	INTEGRAL HAIL GUARD	
48	<b>Air Flow, SCFM</b>	59,135	<b>HP / Fan</b>	10	1800RPM, 460/60/3, TEFC,	SOFT BUGSCREENS	
49	<b>Outlet Air Temp, °F</b>	103	<b>Dia, In / # Blades</b>	84 / 4	VFD COMP. MOTOR (CSA)	AUTO WARM AIR RECIRC	
50	<b>Min Air Temp, °F</b>	-20	<b>RPM</b>	452			
51			<b>Tipspeed, FPM</b>	9939	MURPHY VS2EX VIB. SWITCH		
52	<b>Est. Noise Data:</b>	82 dBA @ 1m, 61 dBA @ 15m	<b>Pitch, Deg</b>	14.7			

53 **Additional Info.**  
54 \* - API 661 WITH STANDARD EXCEPTIONS & CLARIFICATIONS  
55 \*\* - COOLER PERFORMANCE IS BASED ON PURE WATER & DOES NOT INCLUDE ANY HYDROCARBONS  
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