







<b>Contractor:</b>  <b>TIANCHEN CORP. CHINA</b>	<b>Project :</b>	<b>MKP Methanol Project</b>			<b>Owner :</b>  شرکت کیمیای پارس خاورمیانه <i>Middle East Kimiya Pars Co.</i>
	<b>Unit :</b>	<b>Flare</b>	<b>Phase</b>	<b>Detail Engineering</b>	
	<b>Doc. Title :</b>	<b>Flare Noise Level Datasheet</b>			
<b>Vendor:</b>  <b>SUNPOWER GROUP LTD.</b>	<b>Owner No. :</b>	<b>MKP-VD-8500-237-305-A4</b>			
	<b>Contr. No.:</b>	<b>MKP-11-DE-9000-FE-REQ-237</b>			
	<b>Vendor No.</b>	<b>17013D85000PE00-09</b>			
				<b>Rev. : 0</b>	<b>Page : 1 of 3</b>




## Flare Noise Level Datasheet

REV.	DATE	PURPOSE OF ISSUE	PREPARE	CHECK	REVIEW	APPROVE
0	17.08.2017	Final Issue	Geng Yunfei	Bai Yang	Ji Ningbo	
A	16.06.2017	Issued For Comments	Geng Yunfei	Bai Yang	Ji Ningbo	

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	<b>Unit :</b>	Flare	Phase	Detail Engineering	
	<b>Doc. Title :</b>	Flare Noise Level Datasheet			
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				<b>Rev. : 0</b>	<b>Page : 2 of 3</b>

**REVISION INDEX**

REV. PAGE	A	0	REV. PAGE	A	0	REV. PAGE	A	0	REV. PAGE	A	0
1	X										
2	X										
3	X										
4											
5											
6											
7											
8											
9											
10											
11											
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31											
32											

<b>Contractor:</b>  TIANCHEN CORP. CHINA	<b>Project :</b>	<b>MKP Methanol Project</b>			<b>Owner :</b>  شرکت کیمیاوی پارس خاور میانه Middle East Kinlong Para Co.
	<b>Unit :</b>	<b>Flare</b>	<b>Phase</b>	<b>Detail Engineering</b>	
<b>Vendor:</b>  SUNPOWER GROUP LTD.	<b>Doc. Title :</b>	<b>Flare Noise Level Datasheet</b>			
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	<b>Vendor No.</b>	<b>17013D85000PE00-09</b>			<b>Rev. : 0</b>
<b>Page : 3 of 3</b>					

<b>Flare Noise Level Datasheet</b>		<b>JOB No:</b>	
		<b>RFI / RFP No.:</b>	
<b>Equipment Tag No.</b>	FL-8502	<b>Mechanical Power:</b>	NA kW
<b>Equipment Name</b>	Flare Tip	<b>Speed:</b>	NA r / min
<b>Supplier / Manufacturer</b>	Sunpower	<b>Overall Height :</b>	70m (ground elevation is EL+0.000m)
<b>Model no.</b>	NA		

**1. Case for calculation**

1) Data Sheet

Fluid	Reformed gas blocked outlet	Note
Flow kg/h	510000	
Temperature °C	360	
MW kg/kmol	13.15	
Compositon(Mole%)	0.02% Argon	
	5.17% Carbon Dioxide	
	15.17% Carbon Monoxide	
	48.85% Hydrogen	
	0.46% Methane	
	0.92% Nitrogen	
	29.42% Water	

2) Smokeless Steam

NA

3) Noise Calculation Results

As below.

Flare noise (receptor point description)	a	Note 1	Noise levels guaranteed by supplier in dB (upper tolerance + 0 dB)									Total dB(A)	Remarks Limit/dB(A)
			31.25 Hz	62.5 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz		
Base of flare stack, 1.6m above ground	2	Lp	79.08	84.04	82.05	80.07	75.16	73.24	68.44	64.63	62.85	78.45	
50 m from the center of flare stack, 1.6m above ground	2	Lp	77.25	82.19	80.21	78.23	73.37	71.49	66.76	63.33	61.82	76.72	
100 m from the center of flare stack, 1.6m above ground	2	Lp	74.23	79.11	77.14	75.19	70.47	68.64	64.28	61.69	60.73	74.02	
150 m from the center of flare stack, 1.6m above ground	2	Lp	71.69	76.48	74.54	72.63	68.11	66.27	62.60	60.82	60.28	71.94	
300 m from the center of flare stack, 1.6m above ground	2	Lp	66.94	71.30	69.48	67.76	64.01	62.51	60.67	60.13	60.02	68.98	

Note 1 Purchaser shall select in column "a" the appropriate case - 1 to 5 - as shown below:

- 1) normal design with no need for noise defeating provisions.
- 2) special low-noise design with no need for noise defeating provisions.
- 3) normal design / noise defeating provisions **needed** ( see \* below ).
- 4) special low-noise design / noise defeating provisions **needed** ( see \* below ).
- 5) silencer needed at (Supplier to define) ( see \* below )

\* ( If 3 to 5 is selected ): Silencing measures are described under doc. No. : (Supplier to define)

<b>Supplier, Manufacturer or Vendor</b>		<b>NOISE TEST REQUIREMENTS</b>			
<b>We guarantee that the assembly will not exceed the stated noise levels</b>  Noise data obtained by: calculations <input checked="" type="checkbox"/> similar equipment <input type="checkbox"/> identical equipment <input type="checkbox"/> noise test <input type="checkbox"/>		This equipment may be subject to a noise test NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>			
		<b>At mfrg. premises</b> <input type="checkbox"/> <b>At a noise lab</b> <input type="checkbox"/> <b>At site</b> <input type="checkbox"/>	<b>Other:</b> <input type="checkbox"/>		
<b>Eng. by:</b>	NA	<b>Eng. App.</b>		<b>Rev. No.</b>	0
		<b>EPHSE App.</b>		<b>Date</b>	17-08-2017