

Customer:	
Date:	
Person contacted:	
Position:	
Customer Type:	End user / Service

We are a UK manufacturer of pumps with a range of API610 products. The API designations of the pumps we make are as follows; OH1 - Foot mounted, single stage Overhung pump, OH 2 - Centre-line mounted, single stage overhung pump and VS4 –Vertically suspended, Single Stage line-shaft sump pump. We manufacture the pumps in API610 table HI material combinations with mechanical seals complying with API682.

We are continually updating and developing our products and we are interested in receiving the views of the pump users regarding their selection and construction to make sure they are taken into consideration. I have a few questions that will take 10 minutes to complete which will help us to help you in the future.

GENERAL INFO

1.	<p>Do you apply any of the following international standards across your site?</p> <ul style="list-style-type: none"> A. API 610 10th (ISO 13709:2005) B. Shell-DEP, Exxon-BP, BP-DS. C. Norsok D. Other - please state E. None <p>Remarks:</p>																														
2.	<p>Do you rigidly apply the afore mentioned standards, or will you accept products that deviate? If yes, please sight tyical examples of deviations that you accept.</p> <p>Remarks:</p>																														
3.	<p>Looking at your Centrifugal pump requirements, what type and percentage do you have installed on site? Please tick.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>0-25%</th> <th>25-50%</th> <th>50-75%</th> <th>75-100%</th> </tr> </thead> <tbody> <tr> <td>OH1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>OH2</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>OH4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>BB2</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>VS4</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>OH1 - Foot mounted, single stage Overhung OH2 - Centre-line mounted, single stage overhung OH4 – Vertial in-line, single stage overhung BB2 – Radially split, between bearings, 1 & 2 stage. VS4 - Vertically suspended, single Stage line-shaft sump</p>		0-25%	25-50%	50-75%	75-100%	OH1					OH2					OH4					BB2					VS4				
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The following questions apply to single stage, radially split Centrifugal type OH2 pumps.

PUMP SELECTION

4.	<p>When selecting API 610 OH2 pumps, how important is a 10% head rise from closed valve to duty point? If not mandatory, what percentage would you typically accept?</p> <p style="margin-left: 20px;">A. Mandatory B. Preferable C. Not required</p> <p>Minimum Acceptable Head Rise.....%</p>																														
5.	<p>Do you have a maximum head rise, if so what is this value?</p> <p>Maximum Head Rise.....%</p>																														
6.	<p>Would you accept a pump fitted with an orifice plate to achieve the required head rise, if yes under what circumstances?</p> <p>Remarks:</p>																														
7.	<p>When operating API pumps, between what ranges would you expect the duty point? Please tick.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%;">Preferable</th> <th style="width: 10%;">Always Acceptable</th> <th style="width: 10%;">Acceptable if no alternative</th> <th style="width: 10%;">Would not consider</th> </tr> </thead> <tbody> <tr> <td>80% to 110 % of BEP</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>70% to 120% of BEP</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Closed valve to 120% of BEP</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>No restrictions - accept manufacturers recommendation.</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Other – please specify</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table> <p>Remarks:</p>		Preferable	Always Acceptable	Acceptable if no alternative	Would not consider	80% to 110 % of BEP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	70% to 120% of BEP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Closed valve to 120% of BEP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No restrictions - accept manufacturers recommendation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other – please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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8.	<p>Do you specify a maximum suction specific speed (n_s), if so what is the maximum permissible limit and units of measure.</p> <p>Speed.....Units.....</p>																														
9.	<p>When NPSH is low, would you accept a pump operating outside the parameters stated in question 8 and if yes under what circumstances?</p> <p>Remarks:</p>																														
10.	<p>If NPSH is low, would you consider fitting an inducer to an API 610 OH2 pump, if yes under what circumstances?</p> <p>Remarks:</p>																														

PROCESS CONDITIONS

11.	When looking at your API610 requirements, what percentage of liquids pump would fall in to the following specific gravity (SG) categories? Please tick.																																			
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12.	For API 610 OH2 pumps do you have a requirement to move solids, if so please indicate particle size and concentration? Size mm / Concentration.....ppm																																			
13.	For the following suctions size, what is the maximum fluid viscosity you would expect to pump? A. Less than DN80 (3") suction..... Cst B. DN80 to DN150 (3"-6") suction.....Cst C. DN150 to DN300 (6"-12") suction.....Cst																																			
14.	Thinking about the fluid, what percentage of your process are in the following temperature categories? Please tick.																																			
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15.	What proportion of API OH2 pumps on your site fall into the following design pressure rating categories? Please tick.																																			
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16.	For the following suction flange sizes, what is the maximum suction pressure for API OH2 pumps on your site? Please tick.																																			
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PUMP CONSTRUCTION

17.	<p>For API OH2 pumps do you stipulate maximum nozzle loads, if so what are the loads?</p> <ul style="list-style-type: none"> A. None B. 2 x API 610 C. 4 x API 610 D. Other – please specify <p>Remarks:</p>																												
18.	<p>Do you accept open impellers on Petrochemical & Gas applications?</p> <ul style="list-style-type: none"> A. Never B. Always C. Conditional - please specify <p>Remarks:</p>																												
19.	<p>Do you have Cast Iron pumps on your site, if so which type and why would you select this material over a more exotic?</p> <ul style="list-style-type: none"> A. None B. Flake cast C. Ductile <p>Remarks:</p>																												
20.	<p>Which of the following bearing monitoring types are typically required on each pump? Please tick.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 15%;">Site Standard</th> <th style="width: 15%;">Application Dependent</th> <th style="width: 10%;">Never</th> </tr> </thead> <tbody> <tr> <td>D.E Vib Axial/Vertical</td> <td></td> <td></td> <td></td> </tr> <tr> <td>N.DE. Vib Axial/Vertical</td> <td></td> <td></td> <td></td> </tr> <tr> <td>D.E Brg Temp</td> <td></td> <td></td> <td></td> </tr> <tr> <td>D.E Bearing Temp</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sump Oil/vapour Temp</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other – please specify</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Remarks:</p>		Site Standard	Application Dependent	Never	D.E Vib Axial/Vertical				N.DE. Vib Axial/Vertical				D.E Brg Temp				D.E Bearing Temp				Sump Oil/vapour Temp				Other – please specify			
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21.	<p>When bearing monitoring is required, how would you like the pump to be supplied? Complete with:-</p> <ul style="list-style-type: none"> A. Dimple B. Spot Faced Tapped Hole C. Entire Sensor package D. Other – please specify <p>Remarks:</p>																												

22.	What percentage of your pumps are fitted with some form of bearing sensor? Sensors required.....%
23.	Do you lubricate pump bearings with an oil mist system, if yes what percentage currently and do you foresee this changing within the next 5 years? A. Current.....% B. Future..... %

ENVIROMENT CONDITIONS

24.	What is your typical site ambient temperature? A. Less than -10° C B. -10 to 40°C C. Above 40° C
25.	Do you specify a maximum sound pressure level, if yes what value currently and do you foresee this changing within the next 5 years? Current LeveldBA Future Level.....dBA
26.	Are there any other environmental conditions that you feel we should take into account with regards to the design of our products, e.g. wave motion loading and seismic constraints? Remarks:

ADDITIONAL COMMENTS

27.	Are there any additional comments that you believe will be of help to us in the future development of our products? Remarks:
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