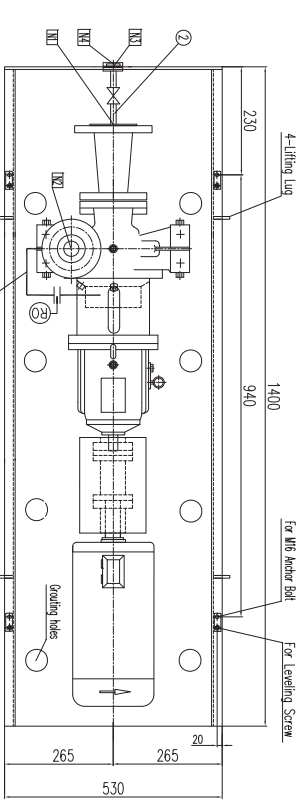
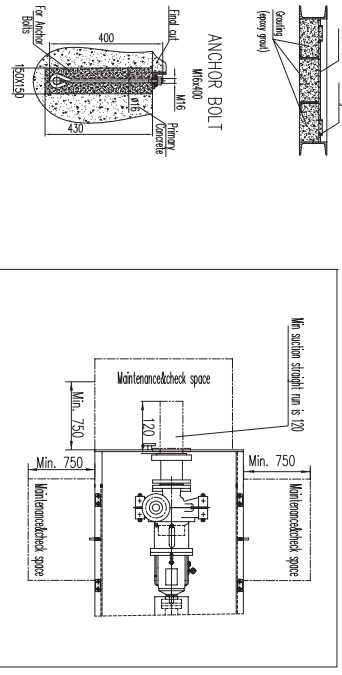


| Pipeline Description |                         |
|----------------------|-------------------------|
| ①                    | Plant Flushing Pipeline |
| ②                    | Pump Drain Pipe         |
|                      |                         |
|                      |                         |
|                      |                         |
|                      |                         |

|  |              |
|--|--------------|
| Maximum Allowable Amplitude For Foundation |              |
| Velocity (PEAK)                            | 4 mm/s       |
| Displacement                               | 25.4 $\mu$ m |



|                        |   |      |
|------------------------|---|------|
| Center of Gravity List |   |      |
| PUMP                   | X | 352  |
|                        | Y | 0    |
|                        | Z | 330  |
| MOTOR                  | X | -390 |
|                        | Y | 0    |
|                        | Z | 330  |

| Dynamic loading calculation results |           |
|-------------------------------------|-----------|
| FXdynamic=±                         | 0 N       |
| FYdynamic=±                         | 8 N       |
| FZdynamic=±                         | 8 N       |
| MXdynamic=±                         | 13/-7 N*m |
| MYdynamic=±                         | 3 N*m     |
| MZdynamic=±                         | 3 N*m     |

|      |                   |        |       |      |       |      |       |
|------|-------------------|--------|-------|------|-------|------|-------|
| N5   | ANS B16.5 300b RF | 3/4"   | 117.3 | 15.7 | 82.5  | 42.9 | 4-ø18 |
| N3   | ANS B16.5 300b RF | 3/4"   | 117.3 | 15.7 | 82.5  | 42.9 | 4-ø18 |
| N2   | ANS B16.5 300b RF | 3/4"   | 117.3 | 15.7 | 82.5  | 42.9 | 4-ø18 |
| N1   | ANS B16.5 300b RF | 1 1/2" | 155.4 | 20.5 | 114.3 | 73   | 4-ø22 |
| Name | Standard          | DN     | øD    | b    | øK    | ød   | n-ød1 |


|                  |                                    |
|------------------|------------------------------------|
| PUMP INFORMATION |                                    |
| Item No.:        | 115-P-111/211 A/B                  |
| Unit:            | 115                                |
| Service:         | BUILDING WATER RECIRCULATING PUMPS |
| Model:           | API10-LF 32-20-160                 |
| Seal Plan:       | 11+01                              |
| Motor:           | 3KW - 2896RPM                      |

| REFERENCE DRAWINGS | DWG NO. |
|--------------------|---------|
|--------------------|---------|

|                       |                             |
|-----------------------|-----------------------------|
| MOTOR OUTLINE DRAWING | IP-S2021-ON-MA-115-P11-0014 |
| COUPLING DRAWING      | IP-S2021-ON-MA-115-P11-0008 |
|                       |                             |
|                       |                             |
|                       |                             |

|       |                                     |   |
|-------|-------------------------------------|---|
| Code1 | <input checked="" type="checkbox"/> | Approved Vendor to submit "For Final" (No comment & release for manufacturing)  |
| Code2 | <input type="checkbox"/>            | Approved with comments Vendor shall correct / revise & submit as "For Final" (Released for manufacturing if change incorporated as indicated) |
| Code3 | <input type="checkbox"/>            | Commented Vendor shall correct / revise & resubmit as "For Approval" of the date specified : ( Corrected documents to be                      |
| Code4 | <input type="checkbox"/>            | Not Acceptable quality (Reject)   |

The above checking result by QEC shall in no way relieve Vendor of any liability, obligation and responsibility out of the purchase order and the mutual agreement in writing.

|                          |    |   |    |
|--------------------------|----|---|----|
| Only for internal review |    |  |    |
| CV                       | PI | EL  | IN |
| ST                       | BU | PR  | SA |
|                          |    |   | ME |
|                          |    |   | HV |
|                          |    |   | TL |

DATE : 01/12/2013

DEPT: Machinery

Signature : Saleem

| REV. | DATE        | DESCRIPTION  | DATE | BY    | APP'D | CONTRACTOR APP'D |
|------|-------------|--------------|------|-------|-------|------------------|
| 2    | 28.Oct.2013 | FOR APPROVAL |      | Apple | Ryan  | Tino             |
| 1    | 14.Aug.2013 | FOR APPROVAL |      | Apple | Ryan  | Tino             |
| 0    | 23.May.2013 | FOR APPROVAL |      | Apple | Ryan  | Tino             |



|         |  |
|---------|--|
| SCALE : |  |
|---------|--|



115-P-111 A/B 115-P-211 A/B  
BUTANE WATER RECIRCULATING PUMPS  
GENERAL ARRANGEMENT DRAWING