



 <p>NISOC</p>	<p>نگهداشت و افزایش تولید میدان نفتی بینک سطح الارض و ابنیه تحت الارض</p> <p>خرید پکیج پمپ های آب آتشنشانی ایستگاه تقویت فشار گاز بینک (قرارداد BK-HD-GCS-CO-0023_00)</p>																									
<p>شماره پیمان: ۰۵۳ - ۰۷۳ - ۹۱۸۴</p>	<table border="1"> <tr> <th colspan="8">MECHANICAL RUNNING TEST PROCEDURE</th> </tr> <tr> <td>پروژه</td> <td>بسته کاری</td> <td>صادر کننده</td> <td>تسهیلات</td> <td>رشته</td> <td>نوع مدرک</td> <td>سریال</td> <td>نسخه</td> </tr> <tr> <td>BK</td> <td>GCS</td> <td>KP</td> <td>120</td> <td>QC</td> <td>PR</td> <td>0006</td> <td>V00</td> </tr> </table>	MECHANICAL RUNNING TEST PROCEDURE								پروژه	بسته کاری	صادر کننده	تسهیلات	رشته	نوع مدرک	سریال	نسخه	BK	GCS	KP	120	QC	PR	0006	V00	<p>شماره صفحه : 2 از 5</p>
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## 1.0 INTRODUCTION

Binak oilfield in Bushehr province is a part of the southern oilfields of Iran, is located 20 km northwest of Genaveh city.

With the aim of increasing production of oil from Binak oilfield, an EPC/EPD Project has been defined by NIOC/NISOC and awarded to Petro Iran Development Company (PEDCO). Also, PEDCO (as General Contractor) has assigned the EPC-packages of the Project to "Hirgan Energy - Design and Inspection" JV.

## 2.0 GENERAL DEFINITION

The following terms shall be used in this document.

CLIENT:	National Iranian South Oilfields Company (NISOC)
PROJECT:	Binak Oilfield Development – Supply Of Fire Water Pumps
EPD/EPC CONTRACTOR (GC):	Petro Iran Development Company (PEDCO)
EPC CONTRACTOR/PURCHASER:	Joint Venture of: Hirgan Energy – Design & Inspection (D&I) Companies
VENDOR:	Kalaye Pump Company
EXECUTOR:	Executor is the party which carries out all or part of construction and/or commissioning for the project.
TPI:	Third Party Inspector.
SHALL:	Is used where a provision is mandatory.
SHOULD:	Is used where a provision is advisory only.
WILL:	Is normally used in connection with the action by CLIENT rather than by an EPC/EPD CONTRACTOR, supplier or VENDOR.
MAY:	Is used where a provision is completely discretionary.

## 3.0 SCOPE

This executive method aims to illustrate the way of the test and testing manufactured/repaired pumps in the factory to achieve assurance about their alignment to those determined characteristics as well as their quality.

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#### 4.0 USAGE DOMAIN

The usage domain of this executive instruction includes all projects of Kalay-E-Pump Company and other common productions.

#### 5.0 LIABILITIES

The quality control director is responsible for executing this instruction, furthermore product supervisor and technical office representative are present in the examination (Test) steps entirely, as auditors.

#### 6.0 REFERENCES

The testing operation of pumps/Electro pumps/Diesel Pumps belonging to Kalay-E-Pump Company is accomplished based on derivate tests of creditable global collected standards for centrifugal and firefighting pumps and gathered movements. (API 610, NFPA 20)

#### 7.0 PROCEEDING DESCRIPTION

The running test (including bearing temperature test, vibration test, noise level test) for all project pumps is carried out according to API 610 and this procedure as well as customer project documents. ”

#### 8.0 MECHANICAL RUNNING TEST

This provides a unified test procedure for each mechanical running test. After the test, a report shall be issued by the testbed and controlled by this procedure.

8.1.1. The pump shall be mechanically run for 4 hours unless otherwise specified or agreed, this run shall be performed at rated flow.

8.1.2. The pump shall be run on the test stand until oil temperature stabilization has been achieved. (if any)

8.1.3. Test Condition

8.1.3.1. Test fluid is clean water.

8.1.3.2. The following meters can be used for testing.

Flowmeter, laser thermometer, digital photo-optical speed counter, vibration meter in mm/s RMS unit, photometer for noise level.

8.1.3.3. Unless otherwise specified, the seal specified in the contract shall be used in the pump for testing. (for mechanical seal pumps)

8.1.4. Test items are .

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8.1.4.1. Vibration of pump bearing in horizontal & vertical direction. Vibration must be according to Table 8 of API 610, 11th edition.

Note: For diesel pumps, the vibration test is not applicable.

8.1.4.2. Temperature of pump bearings.

8.1.4.3. Speed of pump shaft.

8.1.4.4. Noise level at 1meter distance around of package.

8.1.4.5. Leakage by visual checking from the mechanical seal.

Mentioned items shall be recorded each 1 hour.

Note: For diesel pumps, the sound level test is not applicable.

8.1.5 .Acceptable Factors

8.1.5.1 .If it is no leakage by visual checking, a mechanical seal is acceptable. Dripping leakage is acceptable for a soft packing seal.

8.1.5.2 .Noise level of pump set shall be lower than 85dB under rated flow in 1 meter distance and 1.5 m above ground.

8.1.5.3.Vibration must be according to table 8 of API 610 11th edition.

8.1.5.4 .For ring-oiled or splash systems and grease lubricated bearings, an oil temperature below 82°C (180°F) during shop testing is acceptable. The sump oil temperature rise shall not exceed 40°K (70°R) above the ambient temperature in the test cell measured at the time of each reading and if bearing temperature sensors are supplied outer ring temperature shall not exceed 93°C (200° F).