طرح نگهداشت و افزایش تولید ۲۷ مخزن

SPECIFICATION FOR PLANT PIPING SYSTEMS PRESSURE TESTING

نگهداشت و افزایش تولید میدان نفتی بینک

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Status:

IDC: Inter-Discipline Check
IFC: Issued For Comment
IFA: Issued For Approval
AFD: Approved For Design
AFC: Approved For Construction
AFP: Approved For Purchase
AFQ: Approved For Quotation
IFI: Issued For Information
AB-R: As-Built for Client Review
AB-A: As-Built –Approved

REVISION RECORD SHEET

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CONTENTS

0.0 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.

GENERAL DEFINITION

The following terms shall be used in this document.

CLIENT:	National Iranian South Oilfields Company (NISOC)
PROJECT:	Binak Oilfield Development – General Facilities
EPD/EPC CONTRACTOR :	Petro Iran Development Company (PEDCO)
EPC CONTRACTOR:	Joint Venture of : Hirgan Energy – Design & Inspection(D&I) Companies
VENDOR:	The firm or person who will fabricate the equipment or material.
EXECUTOR:	Executor is the party which carries out all or part of construction and/or commissioning for the project.
THIRD PARTY INSPECTOR (TPI):	The firm appointed by EPC CONTRACTOR and approved by GC & COMPANY (in writing) for the inspection of goods.
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 COMPANY rather than by an EPC/EPD CONTRACTOR, supplier or VENDOR.
MAY:	Is used where a provision is completely discretionary.

1.0 SCOPE

This specification gives amendment and supplement to IPS-C-PI-350(2), “Construction Standard for Plan t Piping Systems Pressure Testing “for hydrostatic and pneumatic pressure tests in the piping constructi on works for this project.

It shall be used in conjunction with data/requisition sheets for present document subject.

(IPS-C-PI-350(2) covers the minimum requirements of pressure test to be carried out on plant piping systems. Upon completion of piping systems and before commissioning, it shall be pressure tested in order to prove the strength of the system, its tightness (absence of leaks) and the integrity of weldments and materials.

2.0 NORMATIVE REFERENCES

INTERNATIONAL CODES AND STANDARDS

ASME (AMERICAN SOCIETY OF MECHANICAL ENGINEERES)

- ASME B 31.3 Process Piping
- ASME B 16.5 Pipe Flanges and Flanged Fittings
- ASME Section V Non-Destructive Examination
- ASME PCC-2 Repair of Pressure Equipment and Piping

LOCAL CODES AND STANDARDS

IPS (IRANIAN PETROLEUM STANDARD)

- IPS-C-PI-350 (1) PLANT Piping system Pressure testing
- IPS-C-IN-100 General Instrumentation
- IPS-E-GN-100 Units
- IPS-C-PI-370 Construction Standard for Transportation Pipelines (Onshore) Pressure Testing

THE PROJECT DOCUMENTS

- BK-GNRAL-PEDCO-000-PI-DC-0001 Piping Design Criteria
- BK-GNRAL-PEDCO-000-PR-DB-0001 Process Basis of Design

ENVIRONMENTAL DATA

Refer to "Process Basis of Design; Doc. No. BK-GNRAL-PEDCO-000-PR-DB-0001".

3.0 DEFINITIONS AND TERMINOLOGY

No amendments or supplements are to state.

4.0 UNITS

No amendments or supplements are to state.

5.0 GENERAL REQUIREMENTS (MOD.)

5.1 before commencing pressure test, the executor shall prepare and submit for the engineer approval a detailed test procedure and test package together with the pressure test flow sheets, P&IDs and hydro test diagram. (mod.)

6.0 HYDROSTATIC PRESSURE TESTING

6.1 TEST PRESSURE (MOD.)

6.5.2 REFRIGERATION SERVICE TEST PRESSURE (DEL.)

6.5.3 VACUUM SERVICES TEST PRESSURE (DEL.)

6.5.5 JACKETED LINES TEST PRESSURE (DEL.)

6.7.23 (ADD)

Before injecting water into the pipeline, the suspended particles in the water should be brought below the permissible level using a filter or other possible methods.

6.9.7 (ADD)

In case, after the static water pressure test, the piping system is not put into service for a significant period of time, it is necessary to consider the necessary measures such as use of nitrogen gas with a positive pressure of at least 5 psi.

6.9.8 (ADD)

In case of using anti-corrosion materials, it is necessary to consider the instructions for neutralization at the time of water discharge from the Department of Safety, Health and Environment .If potable or industrial water is used and the storage time inside the pipe is limited to the test time, it will not be necessary to inject multi-purpose corrosion inhibitors.

6.9.9 (ADD)

In order to dry the pipe, hot air blowing should be continued until it reaches below the dew point. The relative humidity inside the pipe shall be same as before the static test. At the same time, the air coming out of the compressor should also be free of any contaminants such as oil. The presence of CLIENT’s representatives of is mandatory in all stages of the above operation.

7.0 PNEUMATIC PRESSURE TESTING

No amendments or supplements are to state.

8.0 REPAIRS

No amendments or supplements are to state.

9.0 MANUFACTURING CERTIFICATE FOR PREFABRICATED PIPING

No amendments or supplements are to state.

10.0 DOCUMENTATION REQUIREMENTS

No amendments or supplements are to state.

ANNEX 1 - HYDROSTATIC TEST RECORD LOG

HYDROSTATIC TEST RECORD LOG

1.SERIAL NO.	2.TEST NO.	3.DESCRIPTION	4.TEST PRESSURE	5. EXAMINATION PRESSURE	6. TEST START	7. TEST COMPLETED	8. T/O DATE	9.REMARK