## 

FOR GENERAL NOTES REFER TO SHEET NUMBER 03.

## INSTRUMENT EARTHING TYPICAL

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1000-Dd-NI-028-00DdA-1dd-ME	DRAWING NO			COMPANIES						BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS & GAS-CONDENSATE PIPELINES	P.O.I.S PREP.	IFI	IFI	IFI	IFI	IFI	
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REFERENCE DRAWING
Specification For Instrumentation
Specification For Control System
Specification For Instrument and Control of
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Fackage Unit System (FU)
Specification For Barthing & Lighting System
Engineering Standard For Exertical System Design
Engineering Standard For Transmission Systems
Engineering And Installation Standard For Control
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BK-GNRAL-PEDCO-000-IN-SP-0002
BK-GNRAL-PEDCO-000-IN-SP-0004
BK-GNRAL-PEDCO-000-EI-SP-0006

DRG. No.

BK-GNRAL-PEDCO-000-IN-SP-0001

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intrinsically Safe
Non intrinsically Safe
Junction Box
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Steel Tire Armor
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Rectrical System Design Criteria
Specification For Earthing & Lightning System
Specification For Earthing & Lightning System
Area Earthing Layout in Shahmakan Gus Injection
Area Earthing Layout in Shahmakan Gus Injection

IPS-E-EI-100
IPS-E-IN-190
IPS-G-IN-220
EK-GNRAL-PEXCO-000-EI-DC-0001
EK-GNRAL-PEXCO-000-EI-PF-0006

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34. EARTHING SYS. FOR NEW GAS COMPRESSOR OF BINAK HAS BEEN SHOWN IN DOCUMENT NO. "BK-GCS-PEDCO-120-IN-DG-0001". EARTHING SYSTEM 33. FOR MTO PLEASE REFER TO MTO For EARTHING & LIGHTING SYSTEM IN SIAHMAKAN GAS INJECTION. DOC. NO. BK-PPL-PEDCO-320-EL-MT-0001) 7. TAPE AND INSULATE NON GROUNDED ENDS OF SCREENS OF SIGNAL CABLES. 4. ALL SPARE CORES WITH IN FIELD I.S. MULTICORE CABLES SHALL BE CONNECTED TO I.S. TERMINALS AT BOTH ENDS AND EARTHED DOWN AT LOCAL EQUIPMENT ROOM TO THE CLEAN EARTH. 1. CABLE SCREENS SHALL BE EARTHED AT ONE POINT ONLY THIS SHALL BE AT THE INSTRUMENT EQUIPMENT ROOM EARTH BARS. CONTINUITY OF THE SIGNAL SHALL BE MAINTAINED THROUGHOUT THE CABLE RUN. <u>~</u> 30. 29. 28. 24. 23. ALL INSTRUMENT STANDS, JUNCTION BOXES, CABLE RACK, TRAY AND TRUNKING ETC SHALL BE CONNECTED TO PLANT EARTH BY 16mm INSTALLATIONS OVER 20m IN LENGTH 10mm FOR INSULATIONS LESS THAN 20m 22. 21. 19.NOT APPLICABLE TO DCS, ESD AND F&G AS PER VENDOR'S REQUIREMENT (SYSTEM EARTH FOR SAFETY SYSTEM IS INTEGRATED INTO SAFETY EARTH AS PER VENDOR'S STANDARD) 18.SCREENS OF CABLES CARRYING I.S. SIGNALS SHALL BE CONNECTED TO AN EARTH BAR SEPARATED FROM EARTH BAR USED FOR SCREENS OF CABLES CARRYING NON I.S. SIGNALS 9. WHERE BARRIERS ARE BAR (AS OPPOSED TO RAIL) MOUNTED THEN MOUNTING BAR TO BE INSULATED & LINKED TO INSTRUMENT EARTH. 8. FIELD EARTHING FOR INSTRUMENT EQUIPMENT TO BE TERMINATED AT LOCAL EARTHING BARS (SUPPLIED BY ELECT GROUP) 6. CABLE TRAY TO BE EARTED AT EACH END OF A RUN. 5. INTERCONNECTION BETWEEN EARTH BARS SHALL BE DOUBLE BOLTED FOR SECURITY. 26. TWO IDENTICAL INSULATED 70mm CONDUCTORS OF THE SAME LENGTH SHALL BE BOLTED TO THE INSTRUMENT EQUIPMENT ROOM EARTH BAR INSTALLATIONS AND TO PLANT EARTH SYSTEM OR MASTER REF 17.SYSTEM REF. EARTHS ARE NOT PREFERRED 14.EARTHING OF DATA HIGHWAYS ACCORDING TO SYSTEM SUPPLIER'S REQUIREMENTS. 13.SCREEN EARTHED AT SYSTEM CABINET OR MARSHALLING CABINET ONLY. 12.FOR INTERCONNECTING HARDWIRED CABLES BETWEEN THE MAIN CONTROL BUILDING AND OTHER BUILDING, SCREEN SHALL BE EARTHED AT THE MAIN CONTROL BUILDING ONLY. 11.CABLE SWA WILL BE EARTHED VIA THE CABLE GLAND TO THE JUNCTION BOX/LOCAL CONTROL PANEL 10.THE RESISTANCE TO EARTH FOR THE INSTRUMENT EARTH AND I.S. EARTH SHALL BE LESS THAN 0.5 OHM INDEPENDENTLY OF SAFETY EARTH 16.EARTH RESISTIVELY AT SITE IS REFERRED TO EARTHING SYSTEM CALCULATION BASED ON THE GEOTECHNICAL STUDY OF SITE 15.THIS DRAWING IS A "PHILOSOPHY ONLY" DRAWING SPECIFIC EARTHING REQUIREMENTS WILL BE SHOWN ON EARTHING SCHEMATICS OR SYSTEM SUPPLIER'S DOCUMENTATION I.S. AND NON-I.S. SIGNALS/CABLES SHALL NOT BE MIXED. FIELD JUNCTION BOXES TO BE DEDICATED TO ONE SIGNAL CATEGORY ONLY. ELECTRODE (BY ELECT DEPT) CONDUCTORS TO BE SPACED 150mm APART (MIN). OF SIAHMAKAN SHALL BE CONNECTED TO EXISTING EARTHING SYSTEM. EFFICIENCY ENDORSE OF EXISTING EARTH SYSTEMS HAS BEEN DONE BY ELECTRICAL DEPARTMENT NEW STANDARD SYSTEM SHALL BE DESIGNED IF REQUIRED LENGTH. COLORED YELLOW/GREEN INSTS/JUNCTION BOXES AND ARMOUR OF FIELD CABLES MAY BE BONDED TO OTHER STAND/FRAMES WITH 6mm CONDUCTOR. THE STAND OR FRAME IS THEN BONDED TO PLANT EARTH IN ACCORDANCE WITH NOTE-23 CABLES SHALL BE CLAMPED TO A RAIL AT THE BASE OF THE CABINET. THE INSULATION AND ARMOUR IS TO BE CUT BACK AND THE ARMOUR CONNECTED TO THE NON-INSULATED SAFETY EARTH USING 2.5mm ALL EQUIPMENT CABINET/PANEL EARTH BARS TO BS2874(C-103) OR EQUIVALENT AND OF 75mm CROSS SECTIONAL AREA (MIN.) BARS MOUNTED ON INSULATORS SHALL BE SPACED AT A MIN. OF 25mm FROM C ALL WIRE LINK CONNECTIONS TO EARTH BARS IN EQUIPMENT CABINETS SHALL BE 1.00mm PVC COVERED CONDUCTORS (YELLOW/GREEN) EARTH BAR FOR PE., I.S & N.I.S. ARE SEPARATE FROM EACH OTHER. ALL EARTH STUDS FOR JUNCTION BOXES J/BOX FRAMES ETC. SHALL BE 10mm DIA. MIN. ALL INTERCONNECTIONS BETWEEN EARTH BARS TO BE 35mm CONDUCTORS. GROUNDING CABLE FOR ONLY SAFETY SYSTEM CABINET (ESD, F&G) SHALL TO GROUNDING BAR INDIVIDUALLY. EARTH BUSES SHALL BE TYPICALLY COPPER, 6 mm THICKNESS AND 40 mm WIDE (IPS-G-IN-220(1)) ALL WIRE LINK CONNECTION TO EARTH BARS IN EQUIPMENT CABINETS SHALL BE A MIN. 1.5mm PVC COVERED CONDUCTORS. MIN DISTANCE BETWEEN P.E. AND C.E. EARTH TB BE 20 METER. (VENDOR TITLE BLOCK)\*\*\* D03 D03 D01 D01 CHESAS SERVICE OF THE PROPERTY INSTRUMENT EARTHING TYPICAL DIAGRAM 品 OILFIELD DEVELOPM H LPAGARAN LAMERSHAD
H LPAGARAN LAMERSHAD ENT/SURFACE FACILITIES EARTH CABLE. GROUND ABINET FRAME. PETROIRAN
DEVELOPMENT
COMPANY TOR (GC) Specification For Control System
Specification For Instrument and Control of
Package Unit System (PU)
Specification For Earthing & Lighthung System
Engineering Synated Top Reporting System
Engineering Synated Top Report REV. hrea Earthing Layout in Siahmakan Gas Injection ILS:
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INSTS ineering Standard For Transmission Systems ineering And Installation Standard For Control ters ation For Earthing & Lightning System System Design Criteria DESCRIPTION GAS & GAS-CONDENSATE PIPELINES Junction Box ntrinsically Safe on Intrinsically CHECKED REV. APPR مال و کلیه نسخ این نشته و حق اقتباس متعلق به شرکت ملی مناطق نفت خیز TRUCTION PERMITTED UNLESS DRAWING
DR CONSTRUCTION BY: I ORIGINAL AND ALL COPIES OF THIS DRAWING TOGETHER WITH THE COPYRIGHT THEREIN ARE THE SOLE PROPERTY OF N.I.S.O.C./ FIELDS K OILFIELD DEVELOPMENT SURFACE FACILITIES

FOR GENERAL NOTES REFER TO SHEET NUMBER 03.

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SHEET NO. REV. 03 OF 04 D04

0-53-073-9184

REVIS D04

BK-PPL-PEDC0-320-EL-PY-0001 BK-GNRAL-PEDCO-000-EL-SP-0006

BK-GNRAL-PEDCO-000-EL-DC-0001

IPS-E-IN-190 IPS-G-IN-220 IPS-E-EL-100 BK-GNRAL-PEDCO-000-IN-SP-0004
BK-GNRAL-PEDCO-000-EL-SP-0006

BK-GNRAL-PEDCO-000-IN-SP-0002

DRG. No.

BK-GNRAL-PEDCO-000-IN-SP-0001

