| ABBREVIATION | SYMBOL DEFINITION                                     |
|--------------|---|
|              | <u>——</u>   |
| &            | AND   |
| L            | ANGLE   |
| @<br>        | AT CENTED LINE  |
|              | CENTER LINE<br>STRUCTURAL TUBING SQUARE               |
| [            | CHANNEL   |
| Ø            | DIAMETER  |
| ,            | FEET  |
| //           | INCH (ES)   |
| /            | OR/PER  |
| R            | PLATE   |
| 0            | DEGREE  |
| %            | PERCENT   |
| I            | I BEAM  |
|              | SLOPE   |
| #            | POUNDS OR POUND                                       |
| ~            | TROUGH  |
| ~            | APPROXIMATION   |
| }            | SPRING  |
| ٦            | 22  |
|              |   |
|              |   |
|              |   |
|              |   |
|              |   |
|              |   |
|              |   |
|              |   |
|              |   |
|              | IRANIAN PETROLEUM STANDARD                            |
| С            |   |
| B A          | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORG |

| A D D D C / / A T   O N | DECIMITION   |
|-------------------------|--|
| ABBREVIATION<br>W       | <u>DEFINITION</u><br>WEST                                  |
| W/                      | WITH   |
| WB                      | WELDED BONNET  |
| WC                      | WATER CLOSET   |
| WCO                     | WATER CLEAN OUT  |
| Wd.                     | WOOD   |
| WE.                     | WELD END   |
| WH                      | WARE HOUSE/WATER HEATER                                    |
| WI                      | WROUGHT IRON   |
| WJ                      | WATER JACKET   |
| WL                      | WELDING LINE   |
| Wld.                    | WELD (ED)  |
| WN                      | WELDING NECK/ WELD NECK                                    |
| W/O                     | WITHOUT  |
| WO                      | WRENCH OPERATED  |
| WOG                     | WATER, OIL OR GAS  |
| Wol.                    | WELDOLET   |
| WP                      | WORKING PRESSURE/ WORKING POINT                            |
| WPS                     | WELDING PROCEDURE SPECIFICATION                            |
| WR                      | WELD RECEPTACLE  |
| Wr.                     | WRENCH   |
| Wt                      | WEIGHT   |
| WT                      | WALL THICKNESS   |
| Χ                       |  |
| XH                      | EXTRA HEAVY  |
| XS                      | EXTRA STRONG   |
| XXH                     | DOUBLE EXTRA HEAVY   |
| XXS                     | DOUBLE EXTRA STRONG  |
|                         |  |
| Y                       | V4.00  |
| Yd                      | YARD   |
| Yr.                     | YEAR   |
| YS                      | YIELD STRENGTH   |
| С                       | IRANIAN PETROLEUM STANDARD                                 |
| В                       | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZA |
|                         |  |
| A                       | ABBREVIATIONS OF DATE DRAWING NO. SHTREY                   |

| _  | <u>ABBREVIATION</u>                  | _DEFINITION_   |  |  |  |  |
|----|--------------------------------------|--|--|--|--|--|
|    | UB                                   | UNION BONNET   |  |  |  |  |
|    | UG                                   | UNDER - GROUND   |  |  |  |  |
|    | Un.                                  | UNION  |  |  |  |  |
|    | UNC                                  | UNIFIED COURSE THREAD  |  |  |  |  |
|    | UNEF                                 | UNIFIED EXTRA FINE THREAD  |  |  |  |  |
|    | UNF                                  | unified fine thread  |  |  |  |  |
|    | Unif.                                | UNIFORM  |  |  |  |  |
|    |                                      | UNINSULATED  |  |  |  |  |
|    |                                      | UNINTERRUPTED POWER SUPPLY   |  |  |  |  |
|    | US                                   | UNDER SIDE/UTILITY STATION   |  |  |  |  |
|    | UW                                   | UNDERGROUND WRAPPED  |  |  |  |  |
|    | V                                    |  |  |  |  |  |
|    | V                                    | VENT   |  |  |  |  |
|    | Vac.                                 | VACUUM   |  |  |  |  |
|    | Vap.                                 | VAPOR  |  |  |  |  |
|    | Var.                                 | VARIABLE   |  |  |  |  |
|    | VB                                   | VAPOR BLIND/ VACUUM BREAKER/ VORTEX BREAKER  |  |  |  |  |
|    | VC                                   | VENT CONNECTION/ VITRIFIED CLAY  |  |  |  |  |
|    |                                      | VENT CONNECTION/ VITALITED CLAT  |  |  |  |  |
|    | VCP                                  |  |  |  |  |  |
|    | VCP<br>VD                            | VITRIFIED CLAY PIPE  VERTICAL DOWN   |  |  |  |  |
|    |                                      | VITRIFIED CLAY PIPE  |  |  |  |  |
|    | VD<br>Vent.<br>Vert.                 | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL   |  |  |  |  |
|    | VD<br>Vent.<br>Vert.<br>Vib.         | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE / VENTILATION  VERTICAL  VIBRATION   |  |  |  |  |
|    | VD<br>Vent.<br>Vert.<br>Vib.<br>Vit. | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS   |  |  |  |  |
|    | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS  VOLUME   |  |  |  |  |
|    | VD<br>Vent.<br>Vert.<br>Vib.<br>Vit. | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS   |  |  |  |  |
|    | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS  VOLUME   |  |  |  |  |
|    | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS  VOLUME   |  |  |  |  |
|    | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS  VOLUME   |  |  |  |  |
|    | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS  VOLUME   |  |  |  |  |
|    | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS  VOLUME   |  |  |  |  |
|    | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS  VOLUME   |  |  |  |  |
|    | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS  VOLUME   |  |  |  |  |
| C  | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS  VOLUME  VERTICAL UP  |  |  |  |  |
| СВ | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE/ VENTILATION  VERTICAL  VIBRATION  VITRIFIED/ VITREOUS  VOLUME   |  |  |  |  |
| -  | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE / VENTILATION  VERTICAL  VIB RATION  VITRIFIED / VITREOUS  VOLUME  VERTICAL UP  IRANIAN PETROLEUM STANDARD  NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION  ARBREVIATIONS OF DATE DRAWING NO. SHT REV. |  |  |  |  |
| В  | VD Vent. Vert. Vib. Vit. Vol.        | VITRIFIED CLAY PIPE  VERTICAL DOWN  VENTILATE / VENTILATION  VERTICAL  VIB RATION  VITRIFIED / VITREOUS  VOLUME  VERTICAL UP  IRANIAN PETROLEUM STANDARD  NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION   |  |  |  |  |

| <u>ABBREVIATION</u> | _ DEFINITION_                     |
|---------------------|-----------------------------------|
| TP                  | TEST PRESSURE/TEST POINT          |
| TPI                 | THREAD PER INCH                   |
| TR                  | TEMPERATURE RECORDER              |
| Trans.              | TRANSFORMER                       |
| TRC                 | TEMPERATURE RECORDING CONTROLER   |
| Trly.               | TROLLEY                           |
| TRT                 | TEMPERATURE RECORDING TRANSMITTER |
| TSE                 | THREADED SMALL END                |
| TSH                 | TEMPERATURE SWITCH HIGH           |
| TSHL                | TEMPERATURE SWITCH HIGH & LOW     |
| TSL                 | TEMPERATURE SWITCH LOW            |
| TSO                 | TIGHT SHUT OFF                    |
| TT                  | TEMPERATURE TRANSMITTER           |
| Turb.               | TURBINE                           |
| Turb. Gen.          | TURBINE GENERATOR                 |
| TV                  | TEMPERATURE VALVE                 |
| TW                  | TREATED WATER/THERMOWELL          |
| Twr.                | TOWER                             |
| Тур.                | TYPICAL                           |
|                     |                                   |
|                     |                                   |
|                     |                                   |
|                     |                                   |
|                     |                                   |
|                     | 1                                 |
|                     |                                   |
| <u> </u>            | IRANIAN PETROLEUM STANDARD\$      |
| -                   | IRANIAN PETROLEUM STANDARD        |
| 3<br>A              |                                   |

| <u>ABBREVIATION</u> | <u>DEFINITION</u>   |  |  |  |  |
|---------------------|---|--|--|--|--|
| T<br>_              | TRAP  |  |  |  |  |
| Tan.                | TANGENT   |  |  |  |  |
| T & C               | THREADED AND COUPLED  |  |  |  |  |
| T & G<br>T TO T     | TOUNG AND GROOVE TANGENT TO TANGENT   |  |  |  |  |
| · · · · ·           |   |  |  |  |  |
| TB                  | TEST BLIND  |  |  |  |  |
| TBE<br>TC           | THREADED BOTH ENDS TEST CONNECTION/TEST CLOSED/THERMOCOUPLE/                  |  |  |  |  |
| I C                 | TEST CONNECTION/TEST CLOSED/THERMOCOUPLE/                                     |  |  |  |  |
|                     |   |  |  |  |  |
| TCV                 | TEMPERATURE CONTROL VALVE   |  |  |  |  |
| TE                  | THREAD END  |  |  |  |  |
| Tel.                | TELEPHONE   |  |  |  |  |
| Temp.<br>TF         | TEMPERATURE<br>TOP FLAT   |  |  |  |  |
| Thrd.               | THREADED  |  |  |  |  |
| Therm.              | THERMAL   |  |  |  |  |
| Thk.                | THICKNESS / THICK   |  |  |  |  |
| Thru.               | THROUGH   |  |  |  |  |
| TI                  | TEMPERATURE INDICATOR   |  |  |  |  |
| TIC                 | TEMPERATURE INDICATING CONTROLER  |  |  |  |  |
| TIG                 | TUNGSTEN INERT GAS ARC WELDING  |  |  |  |  |
| TIT                 | TEMPERATURE INDICATING TRANSMITTER  |  |  |  |  |
| Tk.                 | TANK  |  |  |  |  |
| TL                  | TANGENT LINE  |  |  |  |  |
| TLE                 | THREADED LARGE END  |  |  |  |  |
| TO                  | TEST OPEN   |  |  |  |  |
| TOB<br>TOC          | TOP OF BEAM TOP OF CONCRETE   |  |  |  |  |
| TOF                 | THREADED ONE END  |  |  |  |  |
| TOG                 | TOP OF GROUT  |  |  |  |  |
| Tol.                | THREADOLET / TOLERANCE  |  |  |  |  |
| TOP                 | TOP OF PIPE   |  |  |  |  |
| Tor.                | TORISPHERICAL   |  |  |  |  |
| TOS                 | TOP OF STEEL / TOP OF SUPPORT   |  |  |  |  |
|                     |   |  |  |  |  |
|                     |   |  |  |  |  |
|                     |   |  |  |  |  |
|                     |   |  |  |  |  |
|                     |   |  |  |  |  |
| С                   | IRANIAN PETROLEUM STANDARD <mark>\$</mark>                                    |  |  |  |  |
| В                   | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATI <mark>o</mark> n |  |  |  |  |
| Α                   | ABBREVIATIONS OF DATE DRAWING No. SHT REV.                                    |  |  |  |  |
| LBEV. DESCRIPTION   | DATE PIPING & INSTRUMENT   IPS - D - PI - 100   27                            |  |  |  |  |
| <u> </u>            | /31   |  |  |  |  |

| ABBREVIATI    | ON DEFINITION  |
|---------------|--|
|               |  |
| Sta.<br>Std.  | STATION<br>STANDARD  |
| Std. Wt.      | STANDARD WEIGHT/STANDARD WALL THICKNESS                        |
| STG           | SMALL TANGUE AND GROOVE  |
| Stife. Rind   |  |
| Stl.          | STEEL  |
| Stlt.         | STELLITE   |
| Stm.          | STEAM  |
| Stnls.        | STAINLESS  |
| Str.          | STRAINER / STRUCTURE/STREET                                    |
| St. Wy.       | STAIR WAY  |
| STS           | STEAM TRACED WITH SPACERS & INSULATION                         |
| STT           | STEAM TRACED WITH HEAT TRANSFER CEMENT &                       |
| _             | INSULATION   |
| Suct.         | SUCTION  |
| Supt.         | SUPPORT  |
| SW<br>SWB     | SOCKET WELD<br>SEAL WELD BONNET                                |
| Swg.          | SWAGE  |
| SWP           | STEAM WORKING PRESSURE   |
| Symm.         | SYMMETRICAL  |
| Sys.          | SYSTEM   |
| ,             |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
|               |  |
| С             | IRANIAN PETROLEUM STANDARD                                     |
| В             | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION |
| A             | DATE DRAWING NO SHTIREV  |
|               | ABBREVIATIONS OF   |
| BEV. DESCRIPT | ON DATE PIPING & INSTRUMENT IPS - D - PI - 100 7               |
|               | ·  |

| ABBREVIATION | DEFINITION   |  |  |  |
|--------------|--|--|--|--|
|              | SOUTH / SOLENOID   |  |  |  |
| SAF          | SHUT ON AIR FAILURE  |  |  |  |
| San.         | SANITARY   |  |  |  |
| SAW          | SUBMERGED ARC WELDING  |  |  |  |
| SB           | SPECTACLE BLIND/SLIP BLIND/  |  |  |  |
| 3.5          | SCREWED BONNET/ STUD BOLT  |  |  |  |
| SC           | SAMPLE CONNECTION/SAMPLE COOLER  |  |  |  |
| Sch.         | SCHEDULE (PIPE RATING)   |  |  |  |
| Sched.       | SCHEDULE (TABULATION)  |  |  |  |
|              | SCREW  |  |  |  |
| Scr.         |  |  |  |  |
| Scrd.        | SCREWED  |  |  |  |
| SE           | STUB END   |  |  |  |
| Sec.         | SECTION  |  |  |  |
| Ser.         | SERIES   |  |  |  |
| Ser'l.       | SERIAL   |  |  |  |
| Serv.        | SERVICE  |  |  |  |
| SG           | SPECIFIC GRAVITY   |  |  |  |
| SH           | SHEET / SHOE   |  |  |  |
| SJ           | STEAM JACKET(ED)   |  |  |  |
| Shr.         | SHOWER   |  |  |  |
| Sk.          | SKETCH   |  |  |  |
| Slp.         | SLOPE  |  |  |  |
| Sm.          | SMALLER  |  |  |  |
| SMAW         | SHIELDED METAL ARC WELDING   |  |  |  |
| SM & F       | SMALL MALE & FEMALE  |  |  |  |
| Smls.        | SEAMLESS   |  |  |  |
| SNG          | SYNTHETIC NATURAL GAS  |  |  |  |
| SO           | SLIP ON / STEAM OUT / STRIPPER OUT   |  |  |  |
| SP           | SPECIALITY ITEM  |  |  |  |
| Spec.        | SPECIFICATION  |  |  |  |
| Sph.         | SPHERE   |  |  |  |
| Sply.        | SUPPLY   |  |  |  |
| SPW          | SPIRAL WOUND   |  |  |  |
| Sq.          | SQUARE   |  |  |  |
| SR           | SHORT RADIUS / STRESS RELIEVE  |  |  |  |
| SS           | STAINLESS STEEL  |  |  |  |
| S/S          | SUB STATION  |  |  |  |
| S Shr.       | SAFETY SHOWER  |  |  |  |
| ST           | STEAM TRACE / STEAM TRAP   |  |  |  |
|              |  |  |  |  |
| С            | IRANIAN PETROLEUM STANDARD 🙏   |  |  |  |
| В            | IRANIAN PETROLEUM STANDARD   |  |  |  |
|              | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION  ABBREVIATIONS OF DATE DRAWING NO. SHT REV. |  |  |  |
| В            | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION   |  |  |  |

| <u>ABBREVIATIO</u>  | <u>DEFINITION</u>   |  |
|---|---|--|
| R<br>Rad.<br>RCP<br>Rcpt.<br>Rd.  | RADIUS<br>RADIAL<br>REINFORCED CONCRETE PIPE<br>RECEPTACLE<br>ROAD  |  |
| RD<br>Recip.<br>Recirc.<br>Red.<br>Ref.<br>Ref. Col.<br>Refr.             | ROOF DRAIN RECIPROCATING / RECIPROCATE RECIRCULATE REDUCER / REDUCING REFERENCE / REFINERY REFERENCE COLUMN REFRACTORY  |  |
| Refrig.<br>Reg.<br>Regen.<br>Reinf.<br>Rem.<br>Reqd.                      | REFRIGERATOR REGULATOR REGENERATOR REINFORCING / REINFORCE REMOVE REQUIRED  |  |
| Rev.<br>Rever.<br>RF<br>RFSF<br>RH<br>RJ                                  | REVISION REVERSIBLE RAISED FACE RAISED FACE SMOOTH FINISH RIGHT HAND RING JOINT   |  |
| RL<br>RMS<br>RO<br>Rot.<br>RS<br>RT<br>RTD<br>RTJ<br>Rtn.<br>RTRP<br>RWDP | RANDOM LENGTH / RUBBER LINED ROOT MEAN SQUARE RESTRICTION ORIFICE ROTATION REVERSIBLE SPADE REINFORCED TEFLON/RADIOGHRAPH TEST RESISTANCE TEMPERATURE DETECTOR RING TYPE JOINT RETURN REINFORCED THERMOSETTING RESIN PIPE LINE RAIN WATER DOWN PIPE |  |
| C B A DESCRIPTI   | IRANIAN PETROLEUM STANDARD  NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION  ABBREVIATIONS OF PIPING & INSTRUMENT IPS - D - PI - 100  100  110  110  110  110  110  11   |  |
|   |   |  |

PSE PLAIN SMALL END

PSH PRESSURE SWITCH HIGH

PSHL PRESSURE SWITCH HIGH & LOW

PSL PRESSURE SWITCH LOW
PSV PRESSURE SAFETY VALVE

Pt. POINT

PT PIPE TAP/PRESSURE TRANSMITTER

PU PICK UP

PV PRESSURE VESSEL

PWHT POST WELD HEAT TREATMENT

Q

QC QUALITY CONTROL
QCplg. QUICK COUPLING
QO QUICK OPENING

Qty. QUANTITY

|      |             | <u> </u> |                     |       |                             |     |
|------|-------------|----------|---------------------|-------|-----------------------------|-----|
| C    |             |          | IRANIAN PETRO       | )I FU | M STANDARD                  | ]   |
| В    |             |          |                     |       | OVED BY STANDARD ORGANIZATI | NOI |
| Α    |             |          | ABBREVIATIONS OF    | DATE  | Drawing no. Sht rev         | 1   |
| REV. | DESCRIPTION | DATE     | PIPING & INSTRUMENT |       | IPS - D - PI - 100 23       |     |
|      |             |          |                     |       | 1/31                        | _   |

|     | ABBREVIATION   | DEFINITION   |  |  |  |
|-----|----------------|--|--|--|--|
|     |                |  |  |  |  |
|     | Р              | PUMP   |  |  |  |
|     | P & ID         | PIPING AND INSTRUMENTATION DIAGRAM                             |  |  |  |
|     | Para.          | PARAGRAPH  |  |  |  |
|     | PВ             | PUSH BUTTON/ PRESSURE BLIND                                    |  |  |  |
|     | PBE            | PLAIN BOTH ENDS  |  |  |  |
|     | Pc. (S)        | PIECE (S)  |  |  |  |
|     | PC             | PRESSURE CONTROLER   |  |  |  |
|     | PCV            | PRESSURE CONTROL VALVE   |  |  |  |
|     | PD             | PPRESSURE DROP   |  |  |  |
|     | PDI            | PRESSURE DIFFERENTIAL INDICATOR                                |  |  |  |
|     | PE             | PLAIN END  |  |  |  |
|     | PI             | PRESSURE INDICATOR   |  |  |  |
|     | PIC            | PRESSURE INDICATING CONTROLER                                  |  |  |  |
|     | PIT            | PRESSURE INDICATING TRANSMITTER                                |  |  |  |
|     | Pl.            | PLATE  |  |  |  |
|     | PL             | PROPERTY LINE  |  |  |  |
|     | Platf.         | PLATFORM   |  |  |  |
|     | PLE            | PLAIN LARGE END  |  |  |  |
|     | Plgd.          | PLUGGED  |  |  |  |
|     | Plmb.          | PLUMBING   |  |  |  |
|     | PN             | PRESSURE NOMINAL   |  |  |  |
|     | POE            | PLAIN ONE END  |  |  |  |
|     | Pos.           | POSITIVE   |  |  |  |
|     | PP             | PRESSURE POINT (TEST CONNECTION)                               |  |  |  |
|     | PPM            | PARTS PER MILLION  |  |  |  |
|     | PQR            | PROCEDURE QUALIFICATION TEST RECORD                            |  |  |  |
|     | Pr.            | PAIR   |  |  |  |
|     | PR             | PRESSURE RECORDER  |  |  |  |
| PRC |                | PRESSURE RECORDING CONTROLER                                   |  |  |  |
|     | Prefab.        | PREFABRICATED  |  |  |  |
|     | Press.         | PRESSURE   |  |  |  |
|     | Prl.<br>Prm.   | PARALLEL PERMIT  |  |  |  |
|     | Proc.          | PERMISSIBLE/PERMIT<br>PROCESS                                  |  |  |  |
|     |                | PROCESS PROJECTION/PROJECT                                     |  |  |  |
|     | Proj.          | PROJECTION/ PROJECT PROPERTY                                   |  |  |  |
|     | Prop.<br>PRT   | PRESSURE RECORDING TRANSMITTER                                 |  |  |  |
|     | PS PS          | · · · · · · · · · · · · · · · · · · ·                          |  |  |  |
|     | PS<br>PSB      | PIPE SUPPORT PRESSURE SEAL BONNET                              |  |  |  |
| _   | ran            | FRESSURE SEAL DUNNET   |  |  |  |
| (   | -              | IRANIAN PETROLEUM STANDARD 🙏                                   |  |  |  |
| E   | 3              | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION |  |  |  |
| P   | A              | ABBREVIATIONS OF DATE DRAWING No. SHT REV.                     |  |  |  |
| RE  | V. DESCRIPTION | DATE PIPING & INSTRUMENT IPS - D - PI - 100 22                 |  |  |  |
| 11/ | DESCRIPTION    | /31  |  |  |  |

## ABBREVIATION DEFINITION 0 OIL Oa. OVERALL OPEN ON AIR FAILURE OAF Oct. OCTAGON (AL) OD OUTSIDE DIAMETER OET ONE END THREADED ОН OPEN HOLE OPER OPERATED/OPERATING Opp. OPPOSITE OPTIONAL/OPTION/OPTICS/OPTICAL Opt. OR OUTSIDE RADIUS Orient. ORIENTATION

Orif. ORIFICE
OS OUTSIDE SCREW / OVER SIZE
OS & Y OUTSIDE SCREW & YOKE
OSBL OUTSIDE BATTERY LIMIT

Ovhd. OVERHEAD

| l |      |             |      |                                      |       |                    |       |       |
|---|------|-------------|------|--------------------------------------|-------|--------------------|-------|-------|
| l | C    |             |      | IRANIAN PETRO                        | )I FU | m standar          | D.    |       |
| l | В    |             |      | NO REVISION PERMITTED UNLES          |       |                    |       | NCITA |
| l | Α    |             |      |                                      | DATE  | DRAWING No.        | SHTRE | ٧.    |
|   | REV. | DESCRIPTION | DATE | ABBREVIATIONS OF PIPING & INSTRUMENT |       | IPS - D - PI - 100 | 21/   |       |
|   |      |             |      |                                      |       |                    | 731   |       |

N NORTH
Nat. NATURAL
Natl NATIONAL

NB NOMINAL BORE

NC NATIONAL COARSE (THREAD)/

NORMALLY CLOSED/ NO COMMENT

NDT NUN DESTRUCTIVE TEST

NF NATIONAL FINE(THREAD)../NOT FURNISHED
NFPA NATIONAL FIRE PROTECTION ASSOCIATION

Ni. NICKEL Nip. NIPPLE

NO NORMALLY OPEN

No.(S) NUMBER(S)
Nom. NOMINAL
Norm. NORMAL
Noz. NOZZLE

NP NO PAINTING

NPS NOMINAL PIPE SIZE

NPSH NET POSITIVE SUCTION HEAD
NPTF NOMINAL PIPE TAP FEMALE
NPTM NOMINAL PIPE TAP MALE

NRS NON RISING STEM

NS NEAR SIDE/NITROGEN SUPPLY

NTS NOT TO SCALE

| l |      |             |      |                        |       |                               |    |
|---|------|-------------|------|------------------------|-------|-------------------------------|----|
| l | C    |             |      | IRANIAN PETRO          | )I FU | m standard <mark>&amp;</mark> |    |
|   | В    |             |      |                        |       | OVED BY STANDARD ORGANIZATI   | DN |
| l | Α    |             |      | ABBREVIATIONS OF       | DATE  | DRAWING No. SHT REV.          |    |
|   | REV. | DESCRIPTION | DATE | DIDINIC 0 INICTDITMENT |       | IPS - D - PI - 100 20         | L  |

## ABBREVIATION

## DEFINITION

| M     | MALE/MOMENT/MOTOR |
|-------|-------------------|
| Mach. | MACHINE           |

Maint. MAINTENANCE Manif. MANIFOLD Matl. MATERIAL

MAWP MAXIMUM ALLOWABLE WORKING PRESSURE

Max. MAXIMUM

MB MACHINE BOLT/MARSHALING BOX

MCC MOTOR CONTROL CENTER

Mech. MECHANICAL Med. MEDIUM

Mfg. MANUFACTURING Mfr. MANUFACTURER

Mh. MANHOLE

MI MALLEABLE IRON

Mid. MIDDLE

MIG METAL-ARC WELDING
Min. MINIMUM/MINUTE
Misc. MISCELLANEOUS
MJ MECHANICAL JOINT

Mk. MARK

ML MANUAL LOADING/MATCH LINE
MLS MANUAL LOADING STATION

Mnl. MANUAL

MO. MOLYBDENUM MO MOTOR OPERATED

MOV MOTOR OPERATED VALVE/MOVEMENT

Mov. MOVEMENT

MP MEDIUM PRESSURE
MPT MALE PIPE THREAD

MS MILD STEEL

MSYS MINIMUM SPECIFIED YIELD STRESS

MTO MATERIAL TAKE OFF

MW MINERAL WOOL/MITER WELD

|      |             |      |                     |       |                             | J   |
|------|-------------|------|---------------------|-------|-----------------------------|-----|
| C    |             |      | IRANIAN PETRO       | )I FU | M STANDARD                  | ]   |
| В    |             |      |                     |       | OVED BY STANDARD ORGANIZATI | NOI |
| Α    |             |      | ABBREVIATIONS OF    | DATE  | Drawing no. Sht rev         |     |
| REV. | DESCRIPTION | DATE | PIPING & INSTRUMENT |       | IPS - D - PI - 100 19       | L   |

#### **ABBREVIATION** DEFINITION 1 LENGTH/LONG Lab. LABORATORY Lav. LAVATORY LC LOCK CLOSED/LEVEL CONTROLER $I \subset V$ LEVEL CONTROL VALVE l G LEVEL GAUGE LARGER Lar. LH LEFT HAND 11 LEVEL INDICATOR HC LEVEL INDICATING CONTROLER Lin. LINEAR Lig. LIQUID LIT LEVEL INDICATING TRANSMITTER LAP JOINT LOCK OPEN 10 LOA LENGTH OVERALL LOCATE/LOCATION Loc. Lol. LATROLET IM&F LARGE MALE AND FEMALE LP LOW PRESSURE / LOW POINT LONG RADIUS/LEVEL RECORDER ΙR LRC LEVEL RECORDING CONTROLER LRT LEVEL RECORDING TRANSMITTER LS LINE STOPE LSH LEVEL SWITCH HIGH LSHL LEVEL SWITCH HIGH & LOW LSL LEVEL SWITCH LOW LT LEVEL TRANSMITTER LT & G LARGE TONGUE AND GROOVE Lub. LUBRICATE (D) (ING) Lvr. LOUVER I W LAP WELD / LIGHT WEIGHT LONG WELDING NECK I WN

| ı |      |             |      |                             |       |                    |          |
|---|------|-------------|------|-----------------------------|-------|--------------------|----------|
|   | C    |             |      | . IRANIAN PETRO             | )I FU | m standar          | RD.      |
|   | В    |             |      | NO REVISION PERMITTED UNLES |       |                    |          |
|   | Α    |             |      | · ABBREVIATIONS OF          | DATE  | DRAWING No.        | SHT REV. |
|   | REV. | DESCRIPTION | DATE | PIPING & INSTRUMENT         |       | IPS - D - PI - 100 | 18/      |
|   |      |             |      |                             |       |                    |          |

|     | ABBREVIATION | <u>DEFINITION</u>  |  |  |  |  |  |  |  |
|-----|--------------|--|--|--|--|--|--|--|--|
|     | IAS          | INSTRUMENT AIR SUPPLY  |  |  |  |  |  |  |  |
|     | IB           | IRON BODY  |  |  |  |  |  |  |  |
|     | IBBM         | iron body bronze mounted                                       |  |  |  |  |  |  |  |
|     | IBBT         | IRON BODY BRONZE TRIM  |  |  |  |  |  |  |  |
|     | IC           | INSULATION COLD  |  |  |  |  |  |  |  |
|     | ID           | inside diameter  |  |  |  |  |  |  |  |
|     | IH           | insulation hot   |  |  |  |  |  |  |  |
|     | Incl.        | INCLUDED/INCLUDING   |  |  |  |  |  |  |  |
|     | Incr.        | INCREASE   |  |  |  |  |  |  |  |
|     | Incv.        | INCLUSIVE  |  |  |  |  |  |  |  |
|     | Info.        | INFORMATION  |  |  |  |  |  |  |  |
|     | Ins.         | INSULATION/INSULATED   |  |  |  |  |  |  |  |
|     | Inst.        | INSTRUMENT   |  |  |  |  |  |  |  |
|     | Int.         | INTERNAL/INTERIOR  |  |  |  |  |  |  |  |
|     | Integ.       | INTEGRAL   |  |  |  |  |  |  |  |
|     | Interm.      | INTERMEDIATE   |  |  |  |  |  |  |  |
|     | Intmt.       | INTERMITTENT   |  |  |  |  |  |  |  |
|     | Inv.         | INVERT(ED)   |  |  |  |  |  |  |  |
|     | IP           | INSULATION PERSONNEL PROTECTION/IRON PIPE                      |  |  |  |  |  |  |  |
|     | IPB          | WIDE I - BEAM  |  |  |  |  |  |  |  |
|     | IPE          | MEDIUM I - BEAM  |  |  |  |  |  |  |  |
|     | IPS          | iron pipe size/iranian petroleum standard                      |  |  |  |  |  |  |  |
|     | IR           | INSIDE RADIUS  |  |  |  |  |  |  |  |
|     | IS           | INSIDE SCREW/INSULATION SAFETY                                 |  |  |  |  |  |  |  |
|     | IS & Y       | INSIDE SCREW AND YOKE  |  |  |  |  |  |  |  |
|     | ISBL         | INSIDE BATTERY LIMIT   |  |  |  |  |  |  |  |
|     | Iso.         | ISOMETRIC  |  |  |  |  |  |  |  |
|     | J            |  |  |  |  |  |  |  |  |
|     |              | HINGTION DOV   |  |  |  |  |  |  |  |
|     | JB           | JUNCTION BOX   |  |  |  |  |  |  |  |
|     | Jct.         | JUNCTION   |  |  |  |  |  |  |  |
|     | Jt.          | JOINT  |  |  |  |  |  |  |  |
|     |              |  |  |  |  |  |  |  |  |
|     | K            |  |  |  |  |  |  |  |  |
|     | KCS          | KILLED CARBON STEEL  |  |  |  |  |  |  |  |
|     |              |  |  |  |  |  |  |  |  |
| C   |              | IRANIAN PETROLEUM STANDARD                                     |  |  |  |  |  |  |  |
| В   |              | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION |  |  |  |  |  |  |  |
| А   |              | DATE DRAWING NO. SHTIREV                                       |  |  |  |  |  |  |  |
| REV | DESCRIPTION  | ABBREVIATIONS OF PIPING & INSTRUMENT   IPS - D - PI - 100   17 |  |  |  |  |  |  |  |
|     | 223011111011 | 31   |  |  |  |  |  |  |  |

## ABBREVIATION

НН

## DEFINITION

| HAZ   | heat affected zone      |
|-------|-------------------------|
| H & V | HEATING AND VENTILATING |

Hc. HYDROCARBON

H Cplg. HALF COUPLING/HOSE CONNECTOR/HOSE COUPLING

Hd. HEAD

HD HIGH DENSITY/HOLD DOWN/HEAVY DUTY

Hdr. HEADER
Hd. W HARD WARE
HE HORIZONTAL EAST
Hex. HEXAGON/HEXAGONAL

Hex. Stl. HEX STEEL
Hgt. HEIGHT

HN HORIZONTAL NORTH

Horiz. HORIZONTAL

HP HIGH POINT/HIGH PRESSURE/HYDRANT POINT

HPP HIGH PAVING POINT

HPFS HIGH POINT OF FINISHED SURFACE

HANDHOLE

Hr. HANGER (ROD) HR HAND RAIL

HS HORIZONTAL SOUTH/HANGER SPRING

HT HYDRAULIC TEST Htdro. HYDROSTATIC

Htr. HEATER

HV HYDRANT VALVE

HVAC HEATING, VENTILATING & AIR CONDITIONING

Hvy. HEAVY

HW HORIZONTAL WEST/HOT WATER

Hyd. HYDRANT Hydr. HYDRAULIC

|   |      |             | L .  |                             |        |         |            |      |      |
|---|------|-------------|------|-----------------------------|--------|---------|------------|------|------|
|   | C    |             |      | IRANIAN PETRO               | )I FUI | M STA   | ANDAR      | D.   |      |
|   | В    |             |      | NO REVISION PERMITTED UNLES |        |         |            |      |      |
|   | Α    |             |      | ABBREVIATIONS OF            | DATE   | DRAW    | 'ING No.   | SHTF | REV. |
|   | REV. | DESCRIPTION | DATE | DIDING 0 INCTDUMENT         |        | IPS - D | - PI - 100 | 16/  |      |
| 7 |      |             |      |                             |        |         |            | 731  |      |

## ABBREVIATION DEFINITION G GUIDE(PIPE) Ga. GAGE Galvd. GALVANIZED GF GROOVE END GENERAL/GENERATOR Gen. GG GAS GENERATOR GI GALVANIZED IRON GMAW GAS METAL ARC WELDING GO GEAR OPERATED Gov. GOVERNER GΡ GLAND PACKING Gr. GRADE GRP GLASS REINFORCE PIPE Grta. GRATING

GASKET

GAS TUNGSTEN ARC WELDING

Gskt. GTAW

|     | 1           |      |                             |       |                    |          |
|-----|-------------|------|-----------------------------|-------|--------------------|----------|
| C   |             |      | . IRANIAN PETRO             | )I FU | m standari         | D.       |
| В   |             |      | NO REVISION PERMITTED UNLES |       |                    |          |
| Α   |             |      | ABBREVIATIONS OF            | DATE  | DRAWING No.        | SHT REV. |
| REV | DESCRIPTION | DATE | DIDINIC 0 INICTDIIMENT      |       | IPS - D - PI - 100 | 15       |

## ABBREVIATION DEFINITION Flex. FLEXIBLE Fla. FLANGE FLANGED Flad. Fltr. **FILTER** FΩ FAIL OPEN FΡ FIRE PROOF FPH FROST PROOF HYDRANT FPT FEMALE PIPE THREAD FLOW OUANTITY INDICATOR FOL FOIC FLOW OUANTITY INDICATING CONTROLER FOR FLOW QUANTITY RECORDER FORC FLOW OUANTITY RECORDING CONTROLER FLOW RECORDER FR FRC FLOW RECORDING CONTROLER FRP FIRERGLASS REINFORCED PIPE FRT FLOW RECORDING TRANSMITTER FS FIELD SUPPORT/ FLOOR SINK/FORGED STEEL/ FLOW SHEET **ESH** FLOW SWITCH HIGH ESHL FLOW SWITCH HIGH & LOW FLOW SWITCH LOW FSL FSS FORGED STAINLESS STEEL FT FLOW TRANSMITTER F Tk. FLUSH TANK FTF FITTING TO FITTING Ftg. FITTING F Thrd. FEMALE THREAD Furn. **FURNISHED** ΕV FULL VACUUM/FLOW VALVE FW FIELD WELD/FIRE WATER

| C    |             |      | IRANIAN PETRO                        | )I FU | m standari         | D.          |    |
|------|-------------|------|--------------------------------------|-------|--------------------|-------------|----|
| В    |             |      | NO REVISION PERMITTED UNLE           |       |                    |             | NC |
| Α    |             |      | 4 D D D E VII A TIONIC OF            | DATE  | DRAWING No.        | SHT REV.    |    |
| REV. | DESCRIPTION | DATE | ABBREVIATIONS OF PIPING & INSTRUMENT |       | IPS - D - PI - 100 | 14/         |    |
|      |             |      |                                      |       |                    | <b>7</b> 31 |    |

|     | A D D D E VI A TION | DEFINITION   |  |  |  |  |  |  |
|-----|---------------------|--|--|--|--|--|--|--|
| -   | ABBREVIATION F      | DEFINITION   |  |  |  |  |  |  |
|     | FA                  | FEMALE/FORCE FLAME ARRESTOR                                    |  |  |  |  |  |  |
|     | F OF F              | FACE OF FLANGE   |  |  |  |  |  |  |
|     | F TO F              | FACE TO FACE   |  |  |  |  |  |  |
|     | F&D                 |  |  |  |  |  |  |  |
|     | Fab.                | FLANGED AND DISHED/FACED AND DRILLED FABRICATED/FABRICATOR     |  |  |  |  |  |  |
|     | FBW                 | FURNACE BUTT WELDED  |  |  |  |  |  |  |
|     | FC                  | FAIL CLOSED  |  |  |  |  |  |  |
|     | FCO                 | FLOOR CLEAN OUT  |  |  |  |  |  |  |
|     | FCV                 | FLOW CONTROL VALVE   |  |  |  |  |  |  |
|     | FD                  | FLOOR DRAIN  |  |  |  |  |  |  |
|     | Fdn.                | FOUNDATION   |  |  |  |  |  |  |
|     | FE                  | FLANGED END/FLOW ELEMENT                                       |  |  |  |  |  |  |
|     | FF                  | FLAT FACE/FULL FACE/FLANGE FACE/FINSH FACE/                    |  |  |  |  |  |  |
|     |                     | FINISH FLOOR   |  |  |  |  |  |  |
|     | FFSF                | flat face smooth finish  |  |  |  |  |  |  |
|     | FG                  | FLOW GLASS   |  |  |  |  |  |  |
|     | FH                  | FIRE HYDRANT/FIRE HOSE/FUME HOOD                               |  |  |  |  |  |  |
|     | FHC                 | fire hose cabinet  |  |  |  |  |  |  |
|     | FHR                 | fire hose rack   |  |  |  |  |  |  |
|     | FI                  | FAIL INDETERMINATE/FLOW INDICATOR                              |  |  |  |  |  |  |
|     | FIC                 | flow indicating controler                                      |  |  |  |  |  |  |
|     | Fig.                | FIGURE   |  |  |  |  |  |  |
|     | Fin.                | FINISH / FINISHED  |  |  |  |  |  |  |
|     | FG                  | FINISHED GRADE   |  |  |  |  |  |  |
|     | FIT                 | FLOW INDICATING TRANSMITTER                                    |  |  |  |  |  |  |
|     | FI.                 | FLOOR  |  |  |  |  |  |  |
|     | FL                  | FAIL LOCKED (LAST POSITION)/FRICTION LOAD                      |  |  |  |  |  |  |
|     | ı                   |  |  |  |  |  |  |  |
| C   |                     | IRANIAN PETROLEUM STANDARD&                                    |  |  |  |  |  |  |
| В   |                     | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION |  |  |  |  |  |  |
| A   |                     | ABBREVIATIONS OF DATE DRAWING NO. SHTREV.                      |  |  |  |  |  |  |
| REV | DESCRIPTION         | DATE PIPING & INSTRUMENT IPS - D - PI - 100 13                 |  |  |  |  |  |  |

## ABBREVIATION

E EAST Ea. EACH

ECC. ECCENTRIC

EF ELECTRIC FURNACE
EFW ELECTRIC FUSION WELD
EI. ELEVATION (HEIGHT)

DEFINITION

Elec. ELECTRICAL

Elev. ELEVATION(VIEW)

Ell. ELBOW

Emer. EMERGENCY
Encl. ENCLOSURE
Eng. ENGINE
Enq. ENQUIRY
Eol. ELBOWLET

EP EXPLOSION PROOF

Eq. EQUAL Eqiv. EQUIVALENT

Equip. EQUIPMENT

ERW ELECTRIC RESISTANCE WELD

ES ELECTRIC SUPPLY

ESD EMERGENCY SHUT DOWN ESh. EMERGENCY SHOWER

Est. ESTIMATE

FT FLECTRIC TRACE

Etc. ETCETERA Evaporator

EWF EYEWASH FOUNTAIN

Exch. EXCHANGER
Exh. EXHAUST
Exist. EXISTING
Exp. EXPANSION

EJ EXPANSION JOINT

Ext. EXTERNAL/EXTENSION/EXTRA

| ı |           |             |      |                     |       |                            | J        |
|---|-----------|-------------|------|---------------------|-------|----------------------------|----------|
| l | $\subset$ |             |      | IRANIAN PETRO       | )I FU | M STANDARD                 |          |
| I | В         |             |      |                     |       | OVED BY STANDARD ORGANIZAT | -<br>IDN |
| l | Α         |             |      | ABBREVIATIONS OF    | DATE  | Drawing no. Sht rev        | /.       |
|   | REV.      | DESCRIPTION | DATE | PIPING & INSTRUMENT |       | IPS - D - PI - 100 12      | L        |
|   |           |             |      |                     |       | /31                        |          |

D DEPHT/DEEP

DA DIRECTIONAL ANCHOR
DC DRAIN CONNECTION

DE DRIVE END
Def. DEFLECTION
Deg. DEGREE
Des. DESIGN

Des.Press. DESIGN PRESSURE
Dept. DEPARTMENT
Desc. DESCRIPTION

Det. DETAIL

DF DRAIN FUNNEL
DI DUCTILE IRON
DIA DIAMETER

Diag. DIAGONAL/DIAGRAM

Diaph. DIAPHRAGM Dim. DIMENSION

DIN DEUTSCHE INDUSTRIE NORM(GERMAN STANDARD)

Disch. DISCHARGE
Distr. DISTRIBUTOR
DL DRAWING LIMIT

DMT DESIGN METAL TEMPERATURE

Dn DOWN

DN DOWN/DIAMETER NOMINAL

DP DRAIN PIT/DIFFERENTIAL PRESSURE

Dr. DRAIN

DS DUMMY SUPPORT/DOWN SPOUT/DATA SHEET

DT DRILL & TAP
DW DUMMY WELD
Dwg. DRAWING

|      | <u> </u>    |      |  |       |                    |          |
|------|-------------|------|--|-------|--------------------|----------|
| C    |             |      | . IRANIAN PETRO                        | )I FU | m standaf          | RD.      |
| В    |             |      | NO REVISION PERMITTED UNLES            |       |                    |          |
| Α    |             |      | A D D D E VIA TION C. OF               | DATE  | DRAWING No.        | SHT REV. |
| REV. | DESCRIPTION | DATE | · ABBREVIATIONS OF PIPING & INSTRUMENT |       | IPS - D - PI - 100 | 11/      |
|      |             |      |  |       |                    | / 3      |

COD CONTINUED ON DRAWING
COI CONTINUED ON ISOMETRIC

Compr. COMPRESSOR

Conc. CONCENTRIC/CONCRETE
Cond. CONDENSER/CONDENSATE

Conn. CONNECTION

Const. CONSTANT/CONSTRUCTION

Cont. CONTINUE/CONTINUATION/CONTINUOUS

Cont'd. CONTINUED
Contr. CONTRACTOR
Coord. COORDINATE
Cor CORNER

Corr. CORRUGATED/CORROSION

Cp. COUPON

CP CORROSION PROBE

Cplg. COUPLING

CPS CONCRETE PIPE SUPPORT

Cr. CHROMIUM

CS CARBON STEEL/COLD SPRING/CAST STEEL

CSC CAR SEAL CLOSE
CSK COUNTER SINK
CSO CAR SEAL OPEN

Cstg. CASTING

CT COOLING TOWER
Ctr(S). CENTER(S)

CW. CLOCKWISE

CW COOLING WATER/COLD WATER
CWP COLD WORKING PRESSURE
CWR COOLD WATER RETURN
CWS COOLD WATER SUPPLY

Cyl. CYLINDER

| $\subset$ |             |      | IRANIAN PETRO                        | )I FU | m standa          | RD.      |
|-----------|-------------|------|--------------------------------------|-------|-------------------|----------|
| В         |             |      | NO REVISION PERMITTED UNLES          |       |                   |          |
| А         |             |      | 4.0.0.0.EV#4.TIONIC OF               | DATE  | DRAWING No.       | SHT REV. |
| REV.      | DESCRIPTION | DATE | ABBREVIATIONS OF PIPING & INSTRUMENT |       | IPS - D - PI - 10 | 0 10/    |
|           |             |      |                                      |       |                   | 731      |

### ABBREVIATION DEFINITION C TO C CENTER TO CENTER C TO F CENTER TO END C TO F CENTER TO FACE C & W COATED AND WRAPPED CA CORROSION ALLOWANCE CAF COMPRESSED ASBESTOS FIBBER Calc. CALCULATED/CALCULATION Cap. CAPACITY CAS CAST ALLOY STEEL Cat. CATALOG/CATALIST СВ CATCH BASIN CCWCOUNTER CLOCKWISE Cem. CEMENT Cer. CERAMIC CES COMBINATION EYEWASH SHOWER CFWCONTINUOUS FILLET WELD CG CENTER OF GRAVITY Chk'd CHECKED Ckd. CHECK CKD COMPLETE KNOCKED DOWN CICAST IRON Circ. CIRCUMFERENCE Ckrd. Pl. CHECKERED PLATE CI. CLASS(FLANGE RATING) Clg. CEILING Clr. CLEAR CMP CORRUGATED METAL PIPE CO CHAIN OPERATED/CLEAN OUT COICOMPRESSION JOINT CO2 CARBON DIOXIDE Coef. COFFFICIENT Col. COLUMN Comb. COMBINATION COMPANION Comp.

|      |             |      |                                      |       |                            | J   |
|------|-------------|------|--------------------------------------|-------|----------------------------|-----|
| C    |             |      | iranian petro                        | )I FU | M STANDARD&                |     |
| В    |             |      |                                      |       | OVED BY STANDARD ORGANIZAT | ION |
| Α    |             |      | A D D D EV // A TIONIC OF            | DATE  | Drawing no. Sht rev        |     |
| REV. | DESCRIPTION | DATE | ABBREVIATIONS OF PIPING & INSTRUMENT |       | IPS - D - PI - 100 9       |     |
|      |             |      |                                      |       | 1/31                       |     |

BA BASE ANCHOR
B & B BELL AND BELL
B TO B BACK TO BACK
B & F BEEL AND FLANGE
B&S BELL AND SPIGOT
BB BOLTED BONNET
BBE BEVEL BOTH END

BC BOLT CIRCLE/ BRANCH CONNECTION/

BOLTED COVER

BE BEVEL END

BEP BOTH END PLAIN
BET BOTH END THREADED

Bet. BETWEEN

BF BLIND FLANGE/BOTTOM FLAT
BFP BACK FLOW PREVENTER

BH BOLT HOLE

BHN BRINELL HARDNESS NUMBER
BL BATTERY LIMIT/BOTTOM LINE

Bld. BLIND Bldg. BUILDING

BLE BEVELED LARGE END

Bm. BEAM

BM BENCH MARK/BENDING MOMENT

BOE BEVELED ONE END
BOM BILL OF MATERIAL
BOP BOTTOM OF PIPE

Bot. BOTTOM Br. BRASS Brz. BRONZE

BSE BEVEL SMALL END

Bsmt. BASEMENT Bush. BUSHING Bvld. BEVELED

BW BUTT WELD/BUTT WELDED

| ı |           |             |      |                             |       |                   |          |
|---|-----------|-------------|------|-----------------------------|-------|-------------------|----------|
| l | $\subset$ |             |      | . IRANIAN PETRO             | )I FU | m standaf         | RD.      |
| p |           |             |      | NO REVISION PERMITTED UNLES |       |                   |          |
| I | Α         |             |      | ABBREVIATIONS OF            | DATE  | DRAWING No.       | SHT REV. |
|   | REV.      | DESCRIPTION | DATE | PIPING & INSTRUMENT         |       | IPS - D - PI - 10 | 0 8/     |
|   |           |             |      |                             |       | 1                 | 1/ - 1   |

A ANCHOR

AARH AVERAGE ARITHMETICROUGHNESS HEIGHT

AAV AUTOMATIC AIR VENT

Abs. ABSOLUTE Abbr. ABBREVIATION

AC AIR CLOSES/AIR CONDITION

Acc. ACCESSORY
Accum. ACCUMULATOR
Adot. ADAPTER

AG ABOVE GROUND

AI ALL IRON
AI. ALUMINUM
AL AREA LIMIT
AIT. ALTERNATE
AO AIR OPENS

AOV AIR OPERATED VALVES

AP ANNALIZER POINT

Aprd. APPROVED

**APPROXIMATELY** Approx. Arrgt. ARRANGEMENT ΑS AIR SUPPLY Asb. **ASBESTOS** Asph. **ASPHALT** Assy. **ASSEMBLY** ΑТ AIR TRAPS Atm. ATMOSPHERE

Auto. AUTOMATIC/AUTOMOBIL

Aux. AUXILIARY Avg. AVERAGE

AVT AUTOMATIC VENT TRAP

| ı |      |             |      |                                      |       |                      |            |
|---|------|-------------|------|--------------------------------------|-------|----------------------|------------|
| l | C    |             |      | . IRANIAN PETRO                      | )I FU | M STANDARD           | ) <b>_</b> |
| I | D    |             |      | NO REVISION PERMITTED UNLES          |       |                      |            |
| I | Α    |             |      |                                      | DATE  | DRAWING No. SI       | HT REV.    |
|   | REV. | DESCRIPTION | DATE | ABBREVIATIONS OF PIPING & INSTRUMENT |       | IPS - D - PI - 100 7 |            |
|   |      |             |      |                                      |       | /                    | 2.1        |

## MISCELLANEOUS

# ABBREVIATION DEFINITION

lb POUND (S)
lbf POUND FORCE

OZ OUNCE

psi POUNDS PER SQUARE INCH

psia POUNDS PER SQUARE INCH ABSOLUTE
psig POUNDS PER SQUARE INCH GAGE (GAUGE)

rpm REVOLUTIONS PER MINUTE rps REVOLUTIONS PER SECOND

scf/h STANDARD CUBIC FEET PER HOUR scf/min. STANDARD CUBIC FEET PER MINUTE

|   | C    |       |         |   |      | IRANIAN            | PETRO  | DLEUI | M STANI      | DAR   | D <b></b>   |   |
|---|------|-------|---------|---|------|--------------------|--------|-------|--------------|-------|-------------|---|
| į | В    |       |         |   |      | NO REVISION PERMIT |        |       |              |       | T           |   |
|   | Α    |       |         |   |      | ABBREVIATI         | ONE OF | DATE  | DRAWING      | No.   | SHT REV     | V |
| Ç | ₿ĒV. | DESCI | RIPTION |   | DATE | PIPING & INST      |        |       | IPS - D - PI | - 100 | 6/          |   |
| ļ |      |       |         |   |      |                    |        |       |              |       | <b>/</b> 31 |   |
|   |      |       |         | _ |      |                    |        |       |              |       |             |   |

# MISCELLANEOUS UNITS

| ABBREVIATION          | DEFINITION   |
|-----------------------|--|
| bbl                   | BARREL   |
| bbl/d                 | BARRELS PER DAY  |
| bbl/h                 | BARRELS PER HOUR   |
| Btu                   | BRITISH THERMAL UNIT   |
| Btu/h                 | BRITISH THERMAL UNIT PER HOUR                                |
| ср                    | CENTI POISE  |
| • F                   | DEGREE FAHRENHEIT  |
| ft                    | FOOT   |
| ft/min.               | FEET PER MINUTE  |
| ft/sec.               | FEET PER SECOND  |
| ft³/h                 | CUBIC FEET PER HOUR  |
| ft <sup>3</sup> /min  | CUBIC FEET PER MINUTE  |
| ft <sup>3</sup> /sec. | CUBIC FEET PER SECOND  |
| ft <sup>3</sup>       | CUBIC FEET   |
| gal/h                 | GALLONS PER HOUR   |
| gal/min.              | GALLONS PER MINUTE   |
| HP                    | HIGH POINT / HIGH PRESSURE                                   |
| hp                    | HORSE POWER  |
| Hz                    | HERTZ  |
| IMP                   | IMPERIAL (BRITISH UNIT)                                      |
| in                    | INCH(ES)   |
| in <sup>3</sup>       | CUBIC INCH   |
| kV                    | KILO VOLT  |
| kVA                   | KILO VOLT AMPERE   |
| kWh                   | KILO WATT HOUR   |
| yd <sup>3</sup>       | CUBIC YARD   |
|                       |  |
|                       |  |
|                       |  |
|                       |  |
|                       |  |
|                       |  |
| С                     | IDANIANI DETROLELIM CTANDADO                                 |
| В                     | IRANIAN PETROLEUM STANDARD                                   |
| А                     | DATE DRAWING NO SHTIREV                                      |
| REV. DESCRIPTION      | ABBREVIATIONS OF DATE PIPING & INSTRUMENT IPS - D - PI - 100 |
| NEV DESCRIPTION       | 31   |

|     |   | SI - UNIT  |
|-----|---|--|
|     | ABBREVIATION  | DEFINITION   |
|     | at atm bar barg c cm d g h j K kg kg/m3 kg/s kgf kgf.m kgf.m/s kj/s km KN kw l m m3/h min mm mm2 N N/m N/mm2 Nm3/h Pa rad s t | TECHNICAL ATMOSPHERE STANDARD ATMOSPHERE BAR BAR GAGE DEGREE CELSIUS CENTIMETRE DAY GRAM HOUR JOULE KELVIN KILOGRAM PER CUBIC METRE KILOGRAM PER SECOND KILOGRAM FORCE KILOGRAM FORCE METRE KILOGRAM FORCE METRE KILOGRAM FORCE METRE KILOGRAM FORCE METRE KILOJOULE PER SECOND KILOMATT LITRE METRE CUBIC METRE PER HOUR MINUTE MILLIMETRE SQUARE MILLIMETRE NEWTON NEWTON PER METRE NEWTON NEWTON PER METRE NEWTON PER SQUARE MILLIMETRE NOMINAL CUBIC METRE PER HOUR PASCAL RADIAN SECOND TONNE |
| C   |   | IRANIAN PETROLEUM STANDARD&  |
| В   |   | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION   |
| RE' |   | ABBREVIATIONS OF DATE DRAWING No. SHTREV.  DATE PIPING & INSTRUMENT IPS - D - PI - 100 4   |

# REFRENCE STANDARDS

| <u>ABBREVIATION</u>  | DEFINITION   |
|--|--|
| ANSI API ASME ASNT ASTM AWS AWWA EJMA ISA MSS  NACE  NFPA PFI PPI SI | AMERICAN NATIONAL STANDARDS INSTITUTE  AMERICAN PETROLEUM INSTITUTE  AMERICAN SOCIETY OF MECHANICAL ENGINEERS  AMERICAN SOCIETY OF NONDESTRUCTIVE TESTING  AMERICAN SOCIETY FOR TESTING MATERIALS  AMERICAN WELDING SOCIETY  AMERICAN WATER WORKS ASSOCIATION  EXPANSION JOINT MANUFACTURERS ASSOCIATION  INSTRUMENT SOCIETY OF AMERICA  MANUFACTURERS STANDARDIZATION SOCIETY  OF THE VALVE AND FITTINGS INDUSTRY  NATIONAL ASSOCIATION OF CORROSION  ENGINEERS  NATIONAL FIRE PROTECTION ASSOCIATION  PIPE FABRICATION INSTITUTE  PLASTIC PIPE INSTITUTE  SYSTEM INTERNATIONAL |
| TEMA   | TUBULAR EXCHANGER MANUFACTURERS  ASSOCIATION   |
| UBC  | UNIFORM BUILDING CODE  |
| C B A REV. DESCRIPTION   | ABBREVIATIONS OF PIPING & INSTRUMENT IPS - D - PI - 100  |
|  | V31  |

## INDEX

| CONTENTS                | PAGE No. |
|-------------------------|----------|
| COVER                   | 1        |
| INDEX                   | 2        |
| STANDARDS               | 3        |
| SI - UNITS              | 4        |
| MISCELLANEOUS UNITS     | 5,6      |
| A TO Z ABBREVIATIONS    | 7 TO 30  |
| ABBREVIATION OF SYMBOLS | 31       |

|   | C    |             |   | IRANIAN PETRO       | )I FU | m standard🌲          | 1    |
|---|------|-------------|---|---------------------|-------|----------------------|------|
|   | В    |             | NO REVISION PERMITTED UNLESS APPROVED BY STANDARD |                     |       |                      | TIDN |
|   | Α    |             |   | ABBREVIATIONS OF    | DATE  | Drawing no. Sht re'  | V.   |
|   | REV. | DESCRIPTION | DATE  | PIPING & INSTRUMENT |       | IPS - D - PI - 100 2 |      |
| ٦ |      |             |   |                     |       | <b>/</b> 31          | _    |

# ABBREVIATIONS OF PIPING & INSTRUMENT DRAWINGS

THIS DWG. SUPERSEDES DWG. No.A - 0 - 5000

| C   |             |      | IRANIAN PETRO               | )I FU | m standar          | RD. |      |
|-----|-------------|------|-----------------------------|-------|--------------------|-----|------|
| В   |             |      | NO REVISION PERMITTED UNLES |       |                    |     |      |
| Α   |             |      | ABBREVIATIONS OF            | DATE  | DRAWING No.        | SHT | REV. |
| REV | DESCRIPTION | DATE | PIPING & INSTRUMENT         |       | IPS - D - PI - 100 |     |      |