

EQUIPMENT

DESIGNATION OF EQUIPMENT:

IDENTIFICATION LETTER:

P 2 0 1 A

OPTIONAL PREFIX

COUNTER NO.

SUBGROUP NO.

GROUP NO.

IDENTIFICATION LETTER

A ANALYSER PACKAGE

B BIOTREATMENT UNITS, SEPTIC TANKS

C COLUMNS, ABSORBERS

D DRIERS

E HEAT EXCHANGERS, ELECTRICAL HEATERS, CONDENSERS, COOLERS AND REBOILERS

F FLARES, VENT STACKS, INCINERATORS

G GENERAL ITEMS AND UNCLASSIFIED EQUIPMENT

H FURNACES, FIRED HEATERS & BOILERS, STEAM BOILERS

I NOT USED

J DESUPERHEATERS, EJECTORS, INJECTORS AND EDUCTORS

K COMPRESSORS, BLOWERS, FANS, VACUUM PUMPS, EXPANDERS

L PIPING AND PIPING ACCESSORIES, UNLOADING ARMS, LOADING ARMS

M MIXERS, AGITATORS AND BLENDEES

N NOT USED

O NOT USED

P PUMPS (CENTRIFUGAL, RECIPROCATING, ROTARY)

Q NOT USED

R REACTORS AND CONVERTORS

S GRAVITY AND MECHANICAL SEPARATORS - E.G. SETTLERS, CYCLONES, CENTRIFUGES, FILTERS, STRAINERS, DUST COLLECTORS, SCREENS, SIEVES (EXCLUDING PIPELINE EQUIPMENT)

T STORAGE TANKS (ATMOSPHERIC), INTERCEPTORS, SPILL COLLECTION AND DRAIN PITS

U NOT USED

V PROCESS VESSELS, PRESSURE VESSELS INCLUDING VAPOUR-LIQUID AND VAPOUR-LIQUID-LIQUID SEPARATORS

W WEIGHBRIDGES

X NOT USED EQUIPMENT (USED FOR VALVES)

Y ANCILLARIES E.G. HYDRAULIC UNITS, JETTY ANCILLARIES, MECHANICAL HANDLING, SLURRY GATES

Z ALL PACKAGES INCLUDING GASEOUS UTILITY PACKAGES (AIR, NITROGEN), LIQUID AND SOLID UTILITY PACKAGES, ELECTRICALLY-RELATED PACKAGES

PIPING AND PIPING COMPONENTS

PIPING NUMBERING SYSTEM

MEDIUM CLASS

XXX - XXXXX - XXXXX - X" - XX

TYPE OF INSULATION

NOMINAL DIAMETER

PIPE CLASS

COUNTER

PROCESS SYSTEM / PID NO.

MEDIUM CLASS

PROCESS

LPG = PRODUCT LIQUID (LPG)

GP = PRODUCT VAPOUR (LPG)

UTILITIES

VBD = BLOW DOWN

CWS = COOLING WATER SUPPLY

CWR = COOLING WATER RETURN

VRV = FLARE

WWF = FIRE WATER

IAI = INSTRUMENT AIR

SLP = LOW PRESSURE STEAM

SHP = LOW PRESSURE STEAM CONDENSATE

SMP = MEDIUM PRESSURE STEAM

NG = NITROGEN

PAI = PLANT AIR / WORKING AIR

RFL = REFRIGERANT LIQUID (PROPYLENE)

RPV = REFRIGERANT VAPOUR (PROPYLENE)

MHG = WATER GLYCOL

INSTRUMENTATION (ISA S5.1)

INSTRUMENT LINE FOR PROCESS CONNECTION

LOGIC INTERLOCK DCS

SCS SIGNAL

UNDEFINED

PNEUMATIC SIGNAL

CAPILLARY TUBE

FLOW DIRECTION

ACTUATOR POWER FAILURE

FAIL OPEN

WITH HAND ACTUATOR

ROTARY MOTOR

FAIL CLOSE

PNEUMATIC OR GENERAL

CYLINDER, SINGLE-ACTING

FAIL LOCKED

DIAPHRAGM WITH POSITIONER

ELECTRIC (SOLENOID)

ELECTRO-HYDRAULIC

GENERAL NOTE:

NOTES:

REMARKS AND SYMBOLS:

HOLDS:

HEAT EXCHANGER, GENERAL

TUBE BUNDLE HEAT EXCHANGER WITH ELECTRICALLY HEATED

TUBE BUNDLE HEAT EXCHANGER WITH FIXED TUBESHEETS

TUBE BUNDLE HEAT EXCHANGER WITH FLOATING HEAD

TUBE BUNDLE HEAT EXCHANGER WITH U-TUBE BUNDLE

TUBE BUNDLE HEAT EXCHANGER KETTLE TYPE

LPG - 301 01 - TB20E - 6" - C1

COLD INSULATION FOR ETHYLENE

NOMINAL DIAMETER

LYCS 300H

COUNTER

PID-301 ETHYLENE RECIPROCATING COMPRESSOR

ETHYLENE VAPOUR

NIG - 730 01 - CA20C - 2"

NO INSULATION

NOMINAL DIAMETER

CARBON STEEL 150H

COUNTER

PID-740 INSTRUMENT & PLANT AIR

INSTRUMENT AIR

PRIMARY ELEMENT SYMBOL FOR FLOW

INSTRUMENT, FIELD MOUNTED

PITOT TUBE

VENTURI TUBE

TURBINE TYPE

POSITIVE DISPLACEMENT TYPE

VORTEX SENSOR

SONIC TYPE

ORIFICE PLATE IN QUICK-CHANGE FITTING

FLOW INDICATOR

FLOW ELEMENT ap CELL

MASS FLOW METER

INSTRUMENT, FIELD MOUNTED

INSTRUMENT, MAIN CONTROL ROOM

INSTRUMENT, LOCAL PANEL MOUNTED

INSTRUMENT FUNCTION, MAIN CONTROL SYSTEM, PROCESS CONTROL SYSTEM (PCS)

SCS INTERLOCK/FUNCTION

LOGIC INTERLOCK

EMERGENCY SHUT DOWN

MOTOR CONTROL CENTRE

FUNCTION BLOCKS-FUNCTION DESIGNATION

SUMMING

HIGH SELECTING

LOW SELECTING

BIAS

MULTIPLYING

INTEGRAL

DERIVATIVE

FUNCTION

LINEAR

DIFFERENCE

PUMP GENERAL

CENTRIFUGAL PUMP

SCREW SPINDLE PUMP

GEAR WHEEL PUMP

COMMON COMPRESSOR

DIAPHRAGM PUMP

PISTON COMPRESSOR

SCREW COMPRESSOR

COMMON ELECTRIC MOTOR

PIPE CLASS

T B 20 E

TYPE OF GASKET

MATERIAL SPECIFICATION (COUNTING NO.)

PRESSURE CLASS

MATERIAL GROUP

TYPE OF GASKET

A = GROOVE / TONGUE

B = GRAPHITE GASKET WITH INNER EYELET AND COMPRESSED CENTER RECESS

C = FLAT RING GASKET, ASBESTOS FREE

E = SPIRAL WOUND GASKET

R = RING JOINT

S = CUTTING RING

T = COMPRESSION RING

NOMINAL DIAMETER / PRESSURE CLASS

INDICATED IN INCHES AND BPS

THE PRESSURE CLASS OF A PIPE IS DETERMINED BY PRESSURE RATE OF THE WEAKEST PIPE SECTION OR BUILT-IN VALVE

PRESSURE CLASS

A = ASME CLASS 1500H

B = ASME CLASS 3000H

C = ASME CLASS 6000H

MATERIAL CLASS

C = CARBON STEEL

D = CARBON STEEL, PE COATED

Q = CARBON STEEL, HOT GALVANIZED

S = STAINLESS STEEL (304/304L)

T = LOW TEMPERATURE CARBON STEEL (LTC)

TYPE OF INSULATION

C1 = COLD INSULATION

C2 = COLD INSULATION SHIP UNLOADING LINE

C3 = COLD INSULATION REFRIGERANT SYSTEM

P1 = PERSONAL PROTECTION (SAFETY)

H1 = WARM INSULATION FOR STEAM

H2 = WARM INSULATION FOR STEAM CONDENSATE

H3 = HEAT TRACING

INSTRUMENTATION acc. ISA-STANDARD S.5.1

FIRST LETTER		SUCCEEDING LETTERS		
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A ANALYSIS		ALARM		
B BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C USER'S CHOICE			CONTROL	CLOSE
D USER'S CHOICE				DEVIATION
E VOLTAGE		SENSOR, PRIMARY ELEMENT		
F FLOW, FLOW RATE	RATIO	GLASS, GAUGE, VIEWING, DEVICE		
G USER'S CHOICE				HIGH
H HAND				
I CURRENT		INDICATE		
J POWER		SCAN		
K TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L LEVEL				LOW
M USER'S CHOICE				MIDDLE, INTERMEDIATE
N USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O USER'S CHOICE		ORIFICE RESTRICTION		OPEN
P PRESSURE		POINT (TEST CONNECTION)		
Q QUANTITY	INTEGRATE, TOTALIZE			
R RADIATION		RECORD, TOTALIZE		RUN
S SPEED, FREQUENCY	SAFETY		SWITCH	STOP
T TEMPERATURE			TRANSMIT	
U MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W WEIGHT, FORCE		WELL, PROBE		
X UNCLASSIFIED	X-AXIS	ACCESSORY DEVICE, UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y EVENT, STATE, PRESENCE	Y-AXIS		AUXILIARY DEVICE	
Z POSITION, DIMENSION	Z-AXIS, SAFETY INSTRUMENTED SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED	FINAL CONTROL ELEMENT

LOADING ARM

TANK TRUCK

FILTER

SILENCER

SPRAY NOZZLE

EQUIPMENT INSULATION

PROCESS LINE

ARROW FOR FLOW DIRECTION

PIPING LINE ARROW INDICATES BATTERY LIMIT

NO POCKETS, IF REQUIRED REQUIRE INDICATION IN 1/2

INSULATED LINE

COOLED OR HEATED LINE

PIPE CROSSING WITHOUT CONNECTION

T-JOINED CONNECTION OF LINES

WELDED BRANCH OR REINFORCED WELDED BRANCH

INSPECTION GLASS

CONDENSATE TRAP

MEASURE AND CONTROL CIRCUITS

AREA BORDER / PACKAGE UNIT BORDER

FLANGES

BLIND FLANGE

SPOOL PIECE

PIPE CAP

LINE LIMIT / SPEC BREAK

SCOPE BREAK (PACKAGE VENDOR TIE-IN POINT) BLACK = VENDOR

STRAINER

CONE STRAINER

Y STRAINER

VALVE, GENERAL

COMMON REGULATING VALVE

GATE VALVE

GLOBE VALVE

THREE WAY BALL VALVE

VALVE WITH RELIEF BORE / SYSTEM

BUTTERFLY VALVE

CHECK VALVE

ANGLE SHUTOFF VALVE

THREE WAY VALVE

FOUR WAY VALVE

CONTROL VALVE

BALL VALVE LOCKED OPEN

SPECTACLE BLIND PLATE (OPEN POSITION)

SPECTACLE BLIND PLATE (CLOSED POSITION)

RESTRICTION ORIFICE

VALVE WITH BLIND FLANGE

PSV

PILOT PRESSURE RELIEF VALVE

NOTE: SAFETY VALVE SYMBOL INCLUDING DESIGN BREAK. ADDITIONAL BREAK SYMBOL NOT REQUIRED.

TSV

THERMAL EXPANSION RELIEF VALVE

NOTE: SAFETY VALVE SYMBOL INCLUDING DESIGN BREAK. ADDITIONAL BREAK SYMBOL NOT REQUIRED.

PSV

VACUUM RELIEF VALVE

NOTE: SAFETY VALVE SYMBOL INCLUDING DESIGN BREAK. ADDITIONAL BREAK SYMBOL NOT REQUIRED.

ATM

20 bar(g)

1"

2"

SET IN

FIRE HYDRANT

FIRE MONITOR

ELEVATED FIRE MONITOR

SPRAY SYSTEM

FUSIBLE PLUG

DELUGE VALVE

HOSE REEL

HOSE BOX

ABBREVIATION:

AG: ABOVE GROUND

BL: BATTERY LIMIT

CSC: CAR SEAL CLOSED

CSD: CAR SEAL OPEN

ESD: EMERGENCY SHUT DOWN

FC: FAIL CLOSED

FI: FAIL INDETERMINATE

FL: FAIL LOCKED (LAST POSITION)

FO: FAIL OPEN

IB: INTEGRAL DOUBLE BLOCK & BLEED

LC: LOCKED CLOSED

LO: LOCKED OPEN

MC: NORMALLY CLOSED

NO: NORMALLY OPEN

TP: TIE-IN POINT

UG: UNDERGROUND

INSTRUMENT NUMBERING SYSTEM

XX XXXX XX

COUNTER NO.

PID / PROCESS

PREFIX SHOWING THE MEASURING INSTRUMENT AND MEASUREMENT / CONTROL TYPE

PT P201 02

COUNTER NO. 2

PID 001 SYSTEM

TRANSMITTER FOR PRESSURE MEASURING

LIST OF SYMBOLS

NO. DATE NAME NAME NAME STATUS SUBJECT OF REVISION

REVISION DRAWN CHECK VALID

ALEXELA LOGISTICS

Alexela - LPG Terminal Extension Tallinn

PROJECT SECTION CODE COMM. NUMBER REV

05339 TH36 PID 0000 0002 1