

**Part 1            General**

**1.1                REFERENCES - GENERAL**

- .1            The Work includes the provision of all instrument specification sheets.
- .2            Refer to Section 29 05 00

**1.2                INSTRUMENT SPECIFICATION SHEETS**

- .1            Provide data sheets to itemize detailed as-built information regarding the Specification of instruments included as part of this Work for each instrument supplied. The data sheets already included in this Section list specific minimum requirements for particular applications.
- .2            Use forms in accordance with the ISA Standard S20 as a template for the preparation of the specification sheets.

**Part 2            Products**

- .1            Refer to the following specification sheets.

<b>INSTRUMENT SPECIFICATION NUMBER:</b>	<b>I-101</b>
<b>DEVICE:</b>	Level Switch
<b>TAG:</b>	Wet well, LSH and LSHH
<b>TYPE:</b>	Float Switch
<b>SERVICE:</b>	Waste water
<b>ENCLOSURE:</b>	Polypropylene float casing with preterminated signal cable
<b>SIGNAL CABLE LENGTH:</b>	20m
<b>OUTPUT:</b>	Relay contact resistive – 10A, 250V
<b>MOUNTING:</b>	Provide strain relief-type connectors to suspend float at desired location. Fabricate mounting brackets from 316 SS. Provide anti-sway rings to prevent sway in turbulent tanks.
<b>MANUFACTURER AND MODEL:</b>	Flygt ENM-10 Consolidated Electric Warwick Magnetrol
<b>ACCESSORIES:</b>	Supply and install intrinsically safe barrier in DCS cabinet

**INSTRUMENT**

**SPECIFICATION NUMBER: I-102**

**DEVICE:** Existing Liquid Level Transmitter

**TAG:** Wet well level

**TYPE:** Bubbler

**SERVICE:** Waste Water

**ACCESSORIES:** Stainless steel tubing and isolation ball valves.

**NOTES:** Supply and install new tubing and isolation valves to allow manual selection between monitoring the level in the current chamber and monitoring the level in the second chamber.

**INSTRUMENT SPECIFICATION NUMBER:** I-103

**DEVICE:** Pressure Transmitter (Differential)

**TAG:** M609-DP, M613-PDT

**SERVICE:** M609-MAU discharge air pressure, LEVEL 300 air pressure

**PROCESS CONNECTIONS:** 1/8" NPT

**RANGE:** -10 mbar to 10 mbar

**INACCURACY:** ±0.25% of span

**OUTPUT:** 4 to 20 mA DC into 500 OHM

**POWER SUPPLY:** Loop powered 24 VDC

**CONSTRUCTION:** Stainless steel wetted parts

**ELECTRONIC ENCLOSURE:** EEMAC 4X

**ACCESSORIES:** mounting bracket

**MANUFACTURER AND MODEL:** Rosemount Type 951, or approved equal in accordance with B6

**NOTES:** Mount in MAU control panel or in separate enclosure

**INSTRUMENT SPECIFICATION NUMBER:** I-104

**DEVICE:** Temperature

**TAG:** M618-TT, M619-TT, M639-TT

**SERVICE:** Space temperature

**SPAN:** -10 to 50 degrees Celsius

**SENSOR:** 3 wire RTD, Pt 100

**INACCURACY:**  $\pm 0.1\%$  of span

**OUTPUT:** 4 to 20 mA DC into 500 OHM

**POWER SUPPLY:** Loop powered 24 VDC

**CONSTRUCTION:** Stainless steel wetted parts

**ELECTRONIC ENCLOSURE:** Universal head, aluminum alloy

**ACCESSORIES:** mounting bracket

**MANUFACTURER AND MODEL:** Rosemount 144 c/w RDT sensor

<b>INSTRUMENT SPECIFICATION NUMBER:</b>	<b>I-105</b>
<b>DEVICE:</b>	Methane Gas Detector
<b>TAG:</b>	M920-GIT, M930-GIT, M932-GIT
<b>SERVICE:</b>	Wet well and gas engine monitoring
<b>RANGE:</b>	0 to 100% LEL
<b>SENSOR:</b>	Infrared Hydrocarbon Gas Detector
<b>INACCURACY:</b>	±3% from 0 to 50% LEL, ±5% from 50 to 100% LEL
<b>OUTPUT:</b>	4 to 20 mA DC into 500 OHM
<b>POWER SUPPLY:</b>	Loop powered 24 VDC
<b>CONSTRUCTION:</b>	Stainless steel wetted parts
<b>ELECTRONIC ENCLOSURE:</b>	Explosion proof, stainless steel
<b>CERTIFICATIONS:</b>	CSA Class 1, Div 1, Groups C & D
<b>ACCESSORIES:</b>	mounting bracket
<b>MOUNTING:</b>	Mount near ceiling
<b>CALIBRATION:</b>	include calibration kit with 2 gas bottles, carrying case, regulator, calibration tubing and hook-up to weather baffle. Provide remote switch and housing for calibration.
<b>MANUFACTURER AND MODEL:</b>	Det-Tronics Pointwatch Eclipse Model PIRECL or approved equal in accordance with B6

<b>INSTRUMENT SPECIFICATION NUMBER:</b>	<b>I-106</b>
<b>DEVICE:</b>	H2S Gas Detector
<b>TAG:</b>	M921-GIT, M931-GIT
<b>SERVICE:</b>	Wet well monitoring
<b>RANGE:</b>	0 to 50 ppm
<b>SENSOR:</b>	Electrochemical
<b>INACCURACY:</b>	±10% of span or ±3 PPM, whichever is greater
<b>OUTPUT:</b>	4 to 20 mA DC into 500 OHM
<b>POWER SUPPLY:</b>	Loop powered 24 VDC
<b>CONSTRUCTION:</b>	Stainless steel wetted parts
<b>ELECTRONIC ENCLOSURE:</b>	Explosion proof, stainless steel
<b>CERTIFICATIONS:</b>	CSA Class 1, Div 1, Groups C & D
<b>ACCESSORIES:</b>	mounting bracket, hydrophobic filter
<b>MOUNTING:</b>	Mount 600mm from floor on Level 300, 1500mm from floor on Level 200
<b>CALIBRATION:</b>	include calibration kit with 2 gas bottles, carrying case, regulator, calibration tubing and hook-up to weather baffle.
<b>MANUFACTURER AND MODEL:</b>	Det-Tronics Infiniti U9500 transmitter with C706E gas sensor, or approved equal in accordance with B6.

**INSTRUMENT SPECIFICATION NUMBER:** I-107

**DEVICE:** Temperature

**TAG:** M636-TT

**SERVICE:** Space temperature

**SPAN:** -10 to 50 degrees Celsius

**SENSOR:** 3 wire RTD, Pt 100

**INACCURACY:**  $\pm 0.1\%$  of span

**OUTPUT:** 4 to 20 mA DC into 500 OHM

**POWER SUPPLY:** Loop powered 24 VDC

**CONSTRUCTION:** Stainless steel wetted parts

**ELECTRONIC ENCLOSURE:** Universal head, aluminum alloy

**ACCESSORIES:** mounting bracket

**MANUFACTURER AND MODEL:** Rosemount 144 c/w RDT sensor

**RATING:** Explosion Proof, Class I, Division 1, Groups B, C & D.