MEDCO House
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Well Testing Data Acquisition
REAM HMI for Well Testing

The REAM HMI is a user-friendly data acquisition system that reads data from electronic sensors and displays the data on a 9" up to 15" TFT touch screen, which acts as both an input and an output device. The system records the data on solid state SD memory card and allows remote monitoring of the data.

The system is made of two main parts, REAM is a microprocessor based data acquisition board, which collects data from electronic sensors, digitise the readings, and supply the appropriate excitation voltage to the sensors. The HMI communicates with the REAM board to retrieve, display, and store the data.

REAM has analogue, counters (frequency), and quadrature channels. The analogue channels accept signals from sensors with 0-5 vdc, 0-10 vdc, or 4-20 mA output. The counters accept pulse signals produced by proximity switches or magnetic pickups. All supplied sensors are intrinsically safe, suitable for use in well testing applications.

In addition to the REAM board, the HMI can communicate with many other devices such as Flow Analyser, Modbus enabled device, serial devices, PLCs, etc.

The outputs are available on Web Pages, they can be viewed remotely on a Local Area Network (LAN) or even a Wide Area Network (WAN), provided that proper Internet connections are available. There are many other features in the HMI and these can be tailored to client's request.

Portable System

Fixed System

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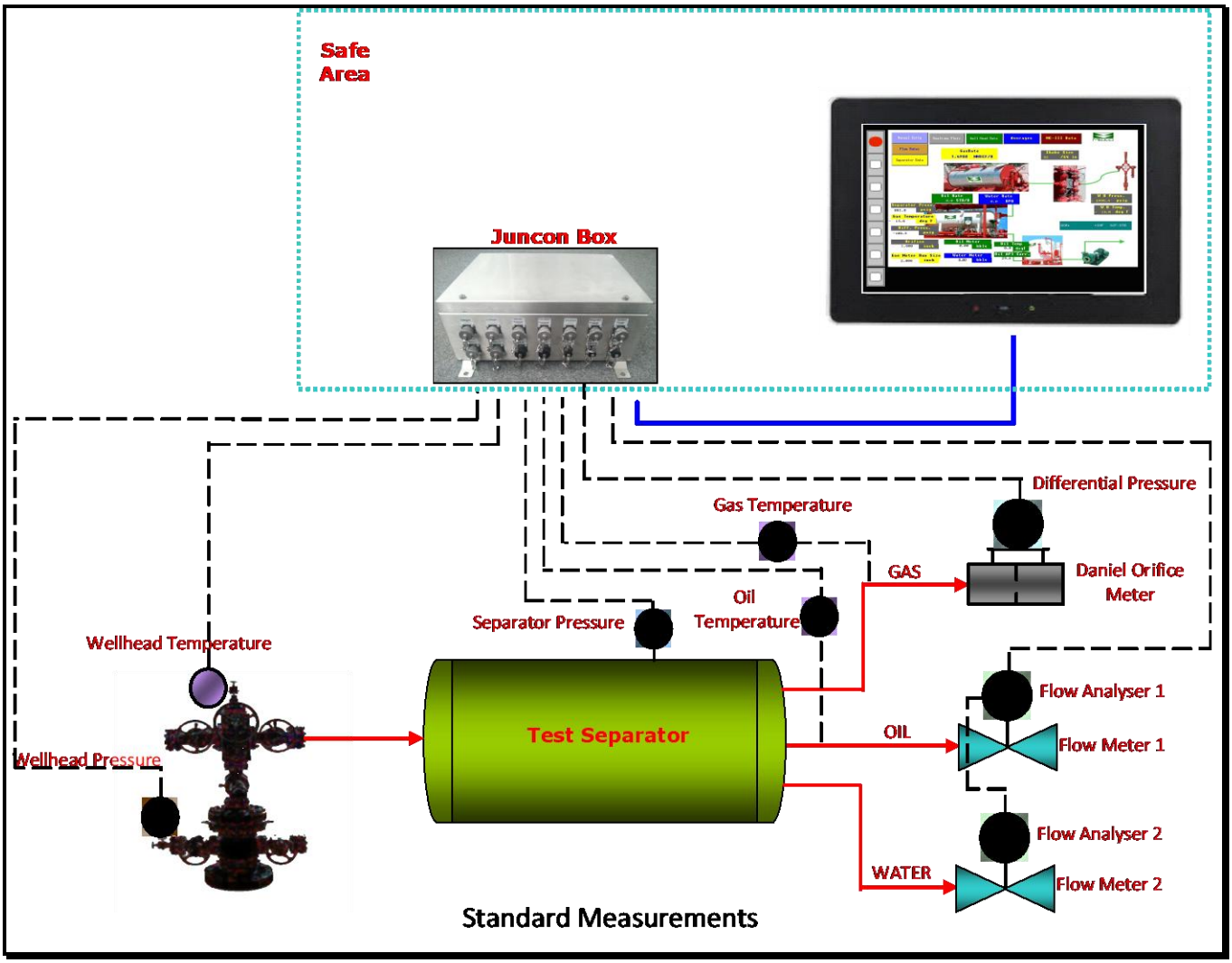

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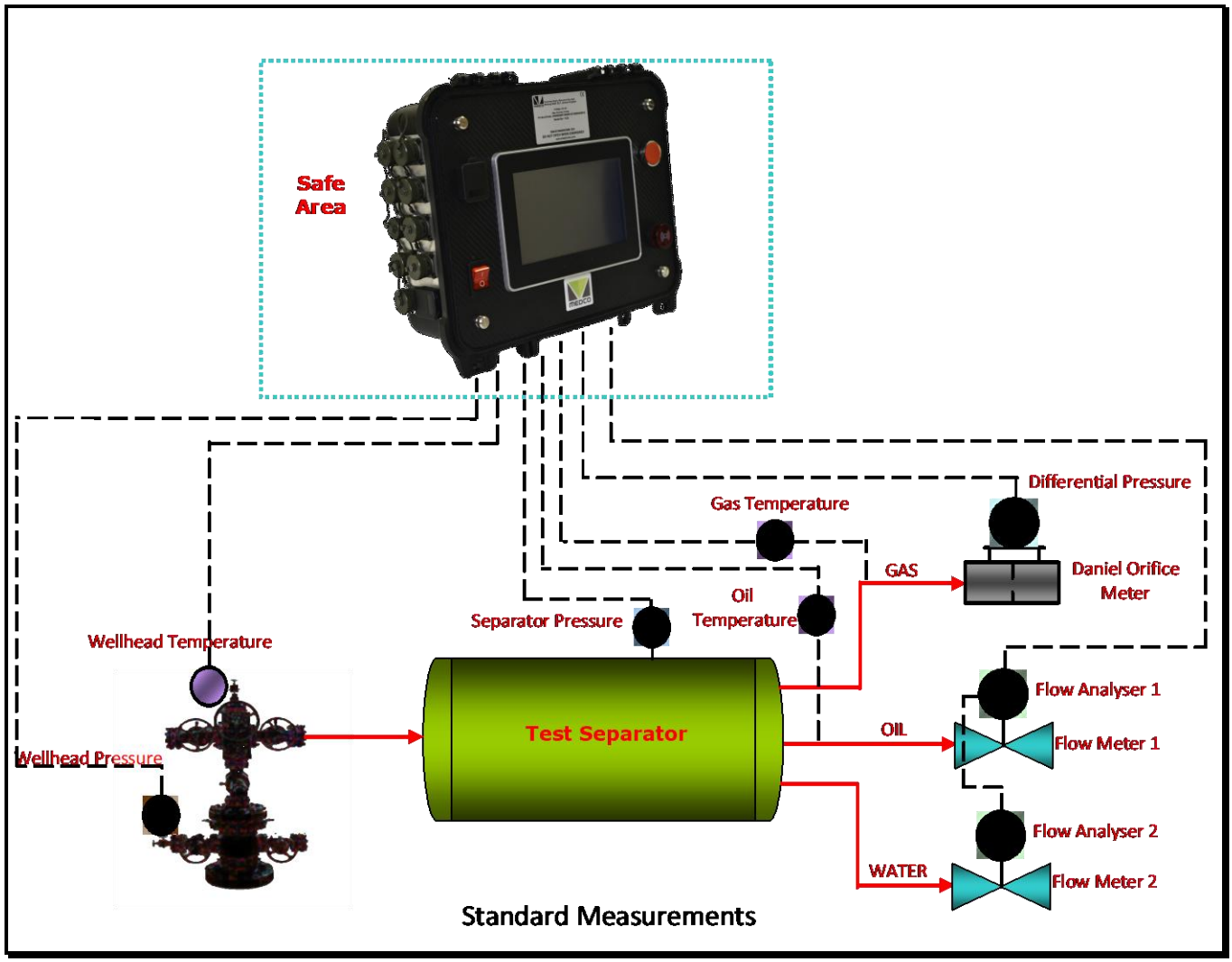

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Standard Measurements

- Wellhead Pressure up to 10,000 psi
- Wellhead Temperature 0 to 250 °F
- Separator Pressure up to 2,000 psi
- Gas Temperature 0 to 250 °F
- Differential Pressure 0 to 400 in H_2O
- Oil Rate and Total (Flow Analyser with Flow Meter)
- Oil Temperature 0 to 250 °F
- Water Rate and Total (Flow Analyser with Flow Meter)

NOTES

- Alternative sensors for pressure, temperature, flow analysers, and flow meters are available from other manufacturers.
- Additional measurements are possible, such as casing pressure, oil temperature, Downstream Pressure and temperature etc.
- All sensors are certified for use in Hazardous areas. IS Barriers are used in the data acquisition unit to ensure compliance with the Hazardous area certification.
- System can be portable (in rugged flightcase), or fixed in stainless steel enclosure.
- ATEX certified version of the data acquisition system available.

Standard Calculations

- Gas Rate
- Oil Rate
- GOR

General Specifications

- Operating voltage: 10 to 30 vdc
- Operating temperature: 0 to 50 °C
- Human Machine Interface (HMI): 9” Touch screen, other sizes available for fixed version
- Data storage: 16 Gbytes SD card

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Junction Box (optional):

Certification:	II 3 G Ex d ia nA IIB T4 Gc Ta -20°C to +55°C
Certificate Number:	ITS14AATEX48051X
Analogue Channels:	8 x 16-bits Standard, maybe increased to 16 x 16 bits
Frequency Channels:	6 Standard, maybe increased to 12

Human Machine Interface (HMI):
cULus Listed for Hazardous Location: File #E317425 Class I, Division 2, Groups A, B, C and D Class II, Division 2, Groups F and G Class III, Division 2 ANSI/ISA 12.12.01, C22.2 No. 213-M1987, 157-92

ATEX Approved II 3 G Ex ic nA IIC T4 Gc II 3 D Ex tc IIIC T135°C Dc DEMKO 14 ATEX 1387X EN 60079-0, -11, -15, -31

IECEx Approved Ex ic nA IIC T4 Gc Ex tc IIIC T135°C Dc IECEx UL 15.0035X IEC 60079-0, -11, -15, -31