



OPENFIELD™
TECHNOLOGY

MICRO INSTRUMENTS FOR HARSH ENVIRONMENTS

FLOW ARRAY SENSING TOOL

MULTIPHASE FLOWS
DEVIATED AND HORIZONTAL WELLS
VERY LOW FLOWS - VERY LOW HOLDUPS
ULTRA COMPACT

FEATURES

TOOL

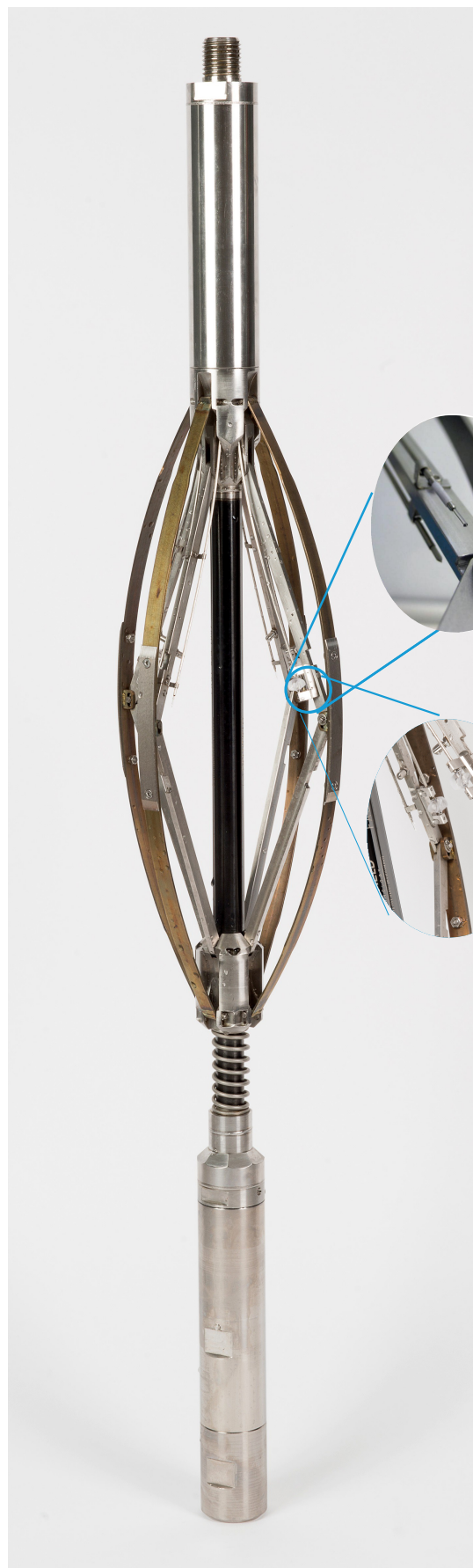
OD	1-11/16 in.
Length	34 in. (86 cm)
Max casing OD	7 in.
Number of arms	4
Fluid identification	8 probes (2 per arm)
Power supply	D-Battery 150 hours of continuous recording
Memory	192 MB
Electrical connexion	Kemlon monopin K25BMA 0.062"
Mechanical Connexion	Top: 15/16" PIN Bottom: 15/16" BOX
Acquisition	Memory or real time through monocable
Interface	Plug & play USB to Computer

MEASUREMENTS

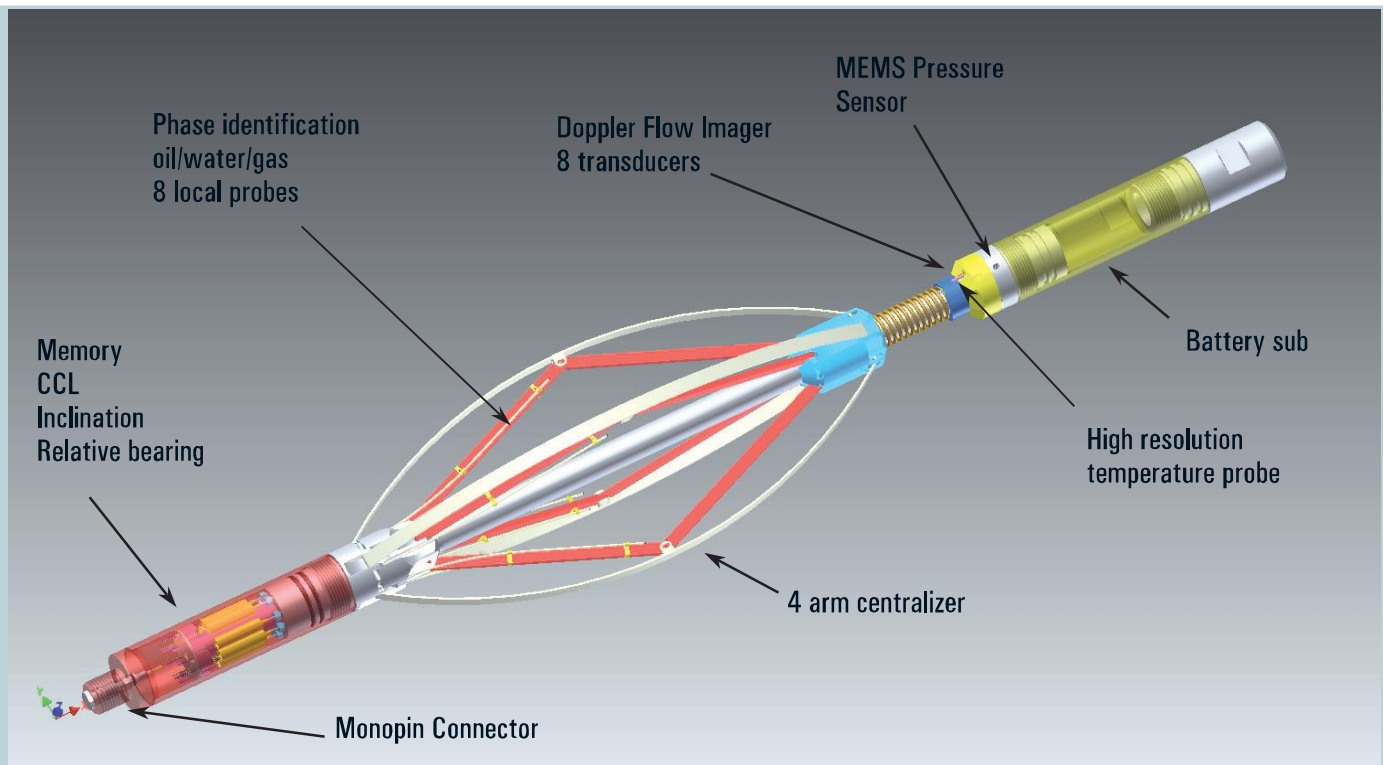
Gas Holdup	Optical probe
Water Holdup	Electrical probe
Flowrate	Magnetic Probe with Micro-Spinner Ultrasonic Doppler Array
Pressure	MEMS Pressure Sensor Accuracy 1 PSI Resolution 0.01 PSI
Temperature	Platinum RTD probe Accuracy 0.1°C Resolution 0.01°C
Inclination	0-90° ± 1
Relative bearing	0-360° ± 3°
CCL	Differential magnetometer

ENVIRONMENTAL

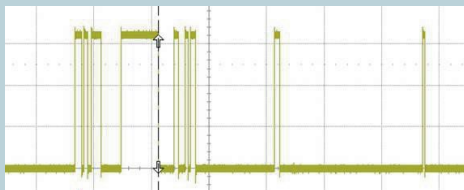
Pressure rating	15 kPSI
Temperature rating	150°C (302°F)
Corrosion	NACE compliant materials Stainless steel 316L, Inconel, Nickel, Sapphire
Shocks	250 G, 2 ms



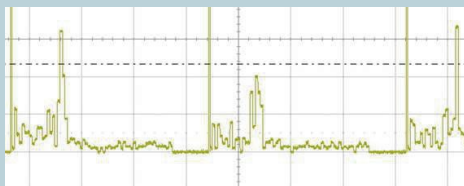
F.A.S.T. FLOW ARRAY SENSING TOOL



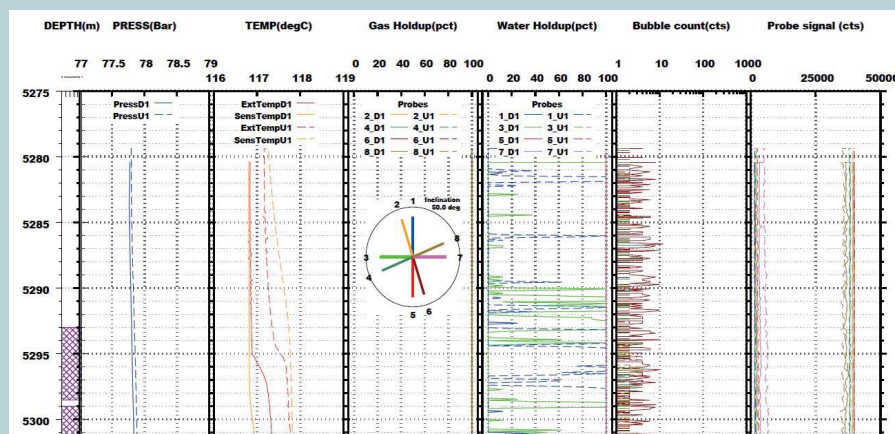
ANSWER PRODUCT



Local probes waveforms: bubble detection and embedded hold up computation

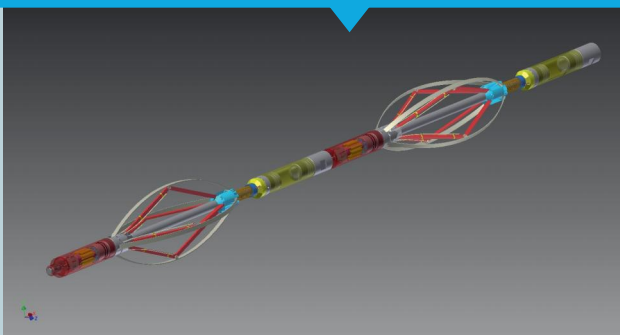


Doppler spectra: velocity measurement and flow pattern

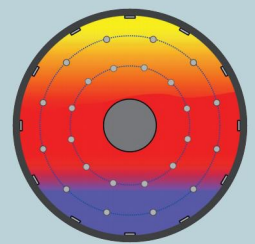


Conversion to LAS files for Reservoir study

DUAL TOOL CONFIGURATION



- 6 feet long
- 16 probes
- 2 ultrasonic arrays - 16 transducers
- One single D-battery for both tools
- One single electronic master and memory board
- Ultra low flow measurements from cross correlation signal between tools



Well section image

Rev A: information furnished by OpenField is believed to be accurate and reliable. However, no responsibility is assumed by OpenField for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications subject to change without notice. No license is granted by implication or otherwise under any patent or patent rights of OpenField. Trademarks and registered trademarks are the property of their respective owners.



www.openfield-technology.com
13 rue de Limoges - 78000 Versailles - France
Tel: +33 (9) 8242 8309 Fax: +33 (9) 8243 8309
©2011-2016 OpenField. All rights reserved.