

EECIFLUX

MPI OCTG Pipe End Testing



Introduction

The EECIFLUX MPI OCTG Pipe End Testing system is engineered to provide comprehensive crack detection in pipes. This state-of-the-art equipment identifies internal and external cracks, as well as superficial and sub-superficial defects, ensuring high-quality standards for oil country tubular goods (OCTG).

KEY FEATURES

Comprehensive Crack Detection

- Internal & External Cracks: Detects all types of cracks at pipe ends.
- Superficial & Sub-Superficial Defects: Ensures thorough inspection across varying depths.

Advanced Magnetic Field Application

- Multi-Directional Magnetization: Utilizes both longitudinal and transversal magnetic fields.
- Efficient Demagnetization: Integrated Hall Effect sensor enables rapid demagnetization, leaving a residual field of 3 Gauss, even in thick pipes.

Flexible Operation

- Independent Field Control: Assign longitudinal power arbitrarily without balancing with transversal fields.

MAGNETIZER/DEMAGNETIZER HEAD

Overview

Designed for precision, the inspection head ensures comprehensive detection of cracks in smooth, threaded, and underlined tube ends.

Key Features

- **Strategically Placed Coils:** Achieves effective magnetization in all directions.
 - **Variety of Test Heads:** Available for pipe diameters ranging from 2" to 20".
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POWER CONTROL PANEL

Advanced Control System

The Power Control Panel is equipped with a micro-controller-based universal Smart digital controller (EF-UC), facilitating easy operation and monitoring.

Key Features

- **Digital Control:** Simple integration with external PLCs via RS-485 port.
 - **Error Detection:** Real-time alerts for optimal conditions and errors during examination.
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SMART DIGITAL CONTROLLER

Consistent Performance

The EECI Smart Digital Controller maintains a constant current output for reliable testing.

Key Features

- **Current Monitoring:** Alerts for low current flow, ensuring system integrity.
 - **Auto Magnetizing Sequential Mode:** Automates the magnetization process for consistent results.
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PC SOFTWARE

User-Friendly Interface

EECI provides software for effective equipment management, ensuring seamless calibration and control.

Key Features

- **Easy Command Sending:** Streamlined command execution for operators.
 - **Database Access:** Efficient access to inspection data for each tube.
 - **Report Management:** Save, visualize, and export reports in WORD or EXCEL formats.
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EECIFLUX MPI RECIRCULATION SYSTEM

Enhanced Efficiency

The MPI Recirculation System complements the testing equipment, improving crack detection results.

Key Features

- **Uniform Particle Suspension:** Maintains consistency with an effective agitation system.
- **Easy Maintenance:** Quick-release system for tank cleaning and maintenance.

SPECIFICATIONS

Parameters	Description	
Mains Supply	3 Phase, 230VAC, 60Hz +/-10%	
Power	12 KVA	
Smart Digital Controller	For Transverse Magnetization (Yoke Head) and Longitudinal Magnetization (Mag Coil)	
Display Resolution	7-segment, 4-Digit Digital Current Display	
Ammeter	0.1 Amp Transverse ADC, Longitudinal ADC	
LED's	Mag ON	Demag ON
	Alarm	
Accuracy	+/- 10% of set value	
Keyboard	1 Back, 2 Right Arrow, 3 UP Arrow, 4 Enter	
Functions of Pendant	Mag ON: Mag ON push button for MAG ON cycle start.	
	Demag ON: Demag ON push button for Demag cycle start.	
	Trans/Multidirectional/Long: Transverse, Multi directional and longitudinal mode selection.	
	Ink ON/OFF: Ink solenoid valve ON/OFF selection.	
Mag Shot Time	Variable from 0.5 seconds to 10 seconds	
Demag Shot Time	Variable from 0.5 seconds to 10 seconds	
Sensor	Current Sensor: For Longitudinal & Transvers	
	Gauss Sensor: For auto demag mode	
	Proxy Switch: For sensing pipe presence.	
Ink Pump	0.5HP, 110VAC, 1 Phase, 60Hz Mono block pump	

Various models and sizes

Model	Tube Range
• EF – OCTG 110	1" - 4" (25mm - 102mm)
• EF – OCTG 180	2 3/8" - 7" (60mm - 178mm)
• EF – OCTG 390	4" - 15" (102mm - 381mm)
• EF – OCTG 510	6" - 20" (152mm - 508mm)

OPTIONAL HANDLING SYSTEMS, ACCESSORIES & CONSUMABLES

Custom Solutions

EECIFLUX offers a variety of optional accessories and consumables tailored to meet industrial needs.

Available Options

- **Handling Systems:** Rotating pipe systems with operational cabins equipped with UV floodlights.
- **Inspection Accessories:** Set of Shims, QQI Inspection, Gauss meter, and centrifugal tube.
- **Fluorescent Powders:** Oil and water-based options for optimal testing results.
- **UV LEDs:** Compliant with ASTM standards