

GE Inspection Technologies

Mentor EM焊缝检测应用



为什么使用涡流方法检测焊缝?



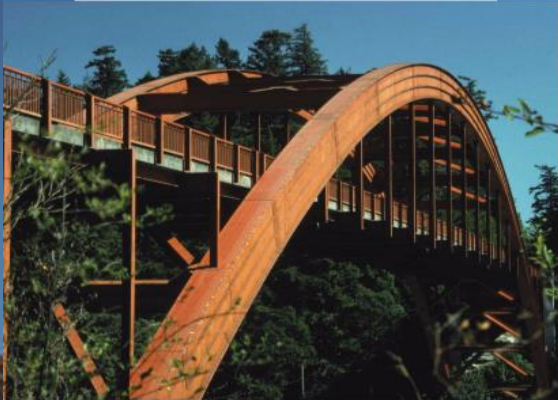
- “绿色技术”
- 使用数字式和可记录的信号提高缺陷发现概率
- 最小化表面预处理; 可透过非导电涂层检测
- 可行性已被证明
- EN标准允许使用
- 检测人员持证上岗

石油天然气行业应用

- 用来检测铁磁性和非铁磁性材料焊缝及某些结构的表面开口型缺陷
- 主要缺陷类型为疲劳裂纹
- 焊缝检测可监控生产制造过程中的新焊缝质量



其他行业焊缝检测应用



焊缝探头可最小化焊缝表面粗糙程度对检测的影响

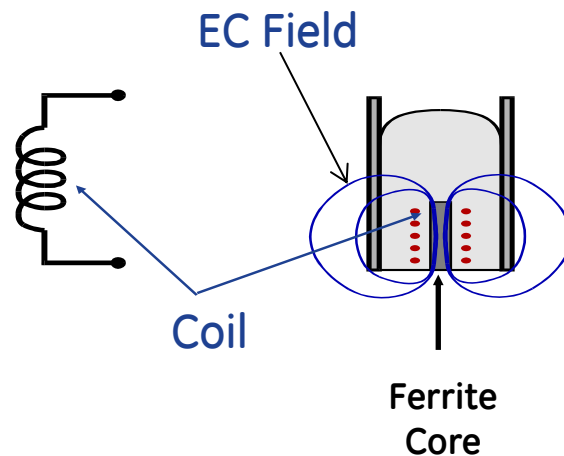
基本信息

- 特殊线圈设计限制体力信号影响
- 正交的差动设计
- 线圈90度正交绕制
- 中心频率：
 - 最常用频率范围: 60 kHz to 700 kHz
- 可定制耐高温及陶瓷外壳探头





imagination

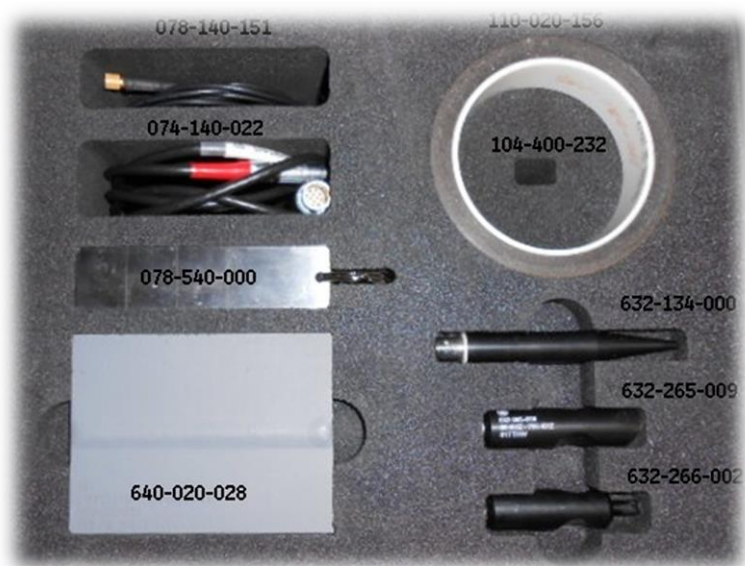
最小化提高信号



标准焊缝探头

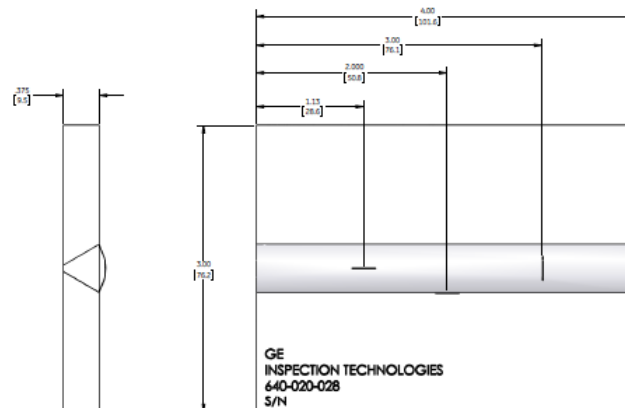
			Phasec 1.1	Locator 2 & 2s	Phasec 2200	Zetec	Staveley/	Disconnect	Disconnect		
			Mini Phasec		D-62		Nortec	Probe	Probe		
			QuickCheck		Phasec 2 & 3		Rohmann	*Cable Required	*Cable Required		
			Connector	6P Jaeger	7P Lemo	12P Lemo	4P Amphenol	8P Burndy	4P Lemo	3P Fischer	
Probe Description			Frequency	Cable Length							
Straight Probes											
7/32" Straight	450kHz-2.5MHz	6'	632-267-000	632-267-015	632-267-002	632-267-004	632-267-006	632-267-008			
		12'	632-267-010								
3/8" Straight	60kHz-1.2MHz	6'	632-266-000							632-266-008	
		12'	632-266-010								
5/8" Straight	60kHz-700kHz	6'	632-265-000							632-265-009	
		12'	632-265-010	632-265-025	632-265-012	632-265-014	632-265-016				
90° Tipped Probes											
7/32", inline, 1/4" drop	450kHz-2.5MHz	6'	632-267-100							632-267-108	632-267-208
		12'	632-267-110								
3/8", inline, 1/4" drop	60kHz-1.2MHz	6'	632-266-100							632-266-108	
		12'	632-266-110								
5/8" Inline, 1/4" Drop	60kHz-700kHz	6'									
		12'									
5/8" 90°, 1/4" Drop	60kHz-700kHz	6'		632-265-112							
		12'									
High wear Straight Probes											
3/8" High Wear (Ceramic Tip)	60kHz-1.2MHz							632-266-011			
5/8" High wear (Ceramic Tip)	60kHz-700kHz	6'	632-265-001	632-265-013	632-265-003	632-265-005	632-265-007	632-265-011			
5/8" High wear (SST)	60kHz-700kHz							632-265-018			
High Temperature											
			425° F (220° C) Continuous Use								
5/8" Straight Handle Length 6"	60kHz-700kHz							632-265-008			

焊缝探头包(订货号 640-025-003)

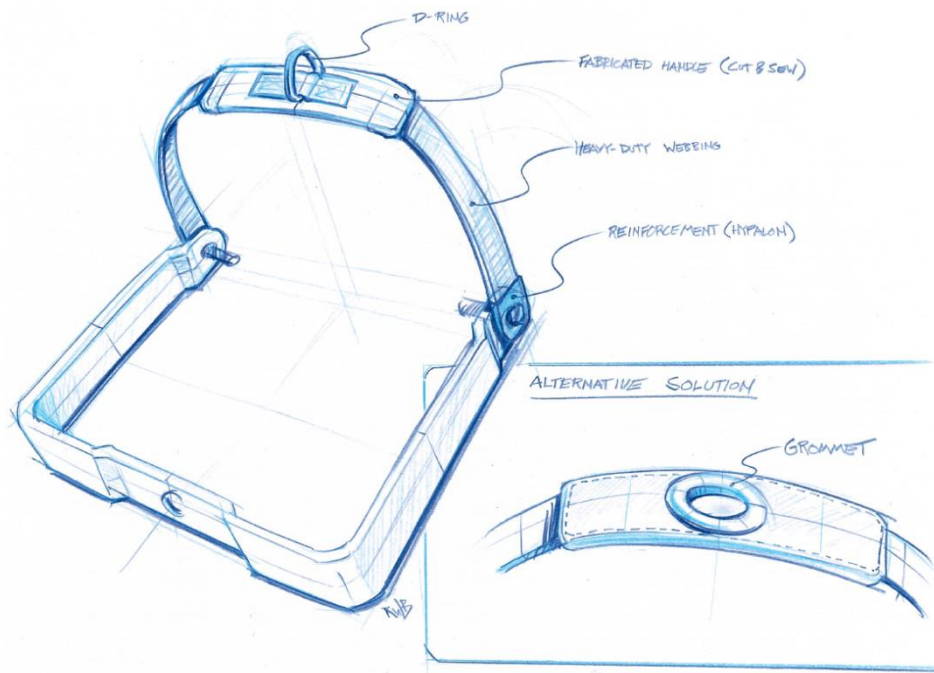


632-266-002
632-265-009
632-134-000
078-140-152
074-140-022
078-540-000
640-020-028
110-020-156

小焊缝探头
大焊缝探头
涂层测量探头
绝对式探头线
分离式探头探头线
带有垫片的焊缝试块
模拟焊缝试块
特氟龙胶带



肩带设计



imagination at work

焊缝检测显示界面

Weld Dual Frequency / Weld Calibration [5 of 9] Jan 23, 2014 5:05 AM 1:39

Weld Calibration

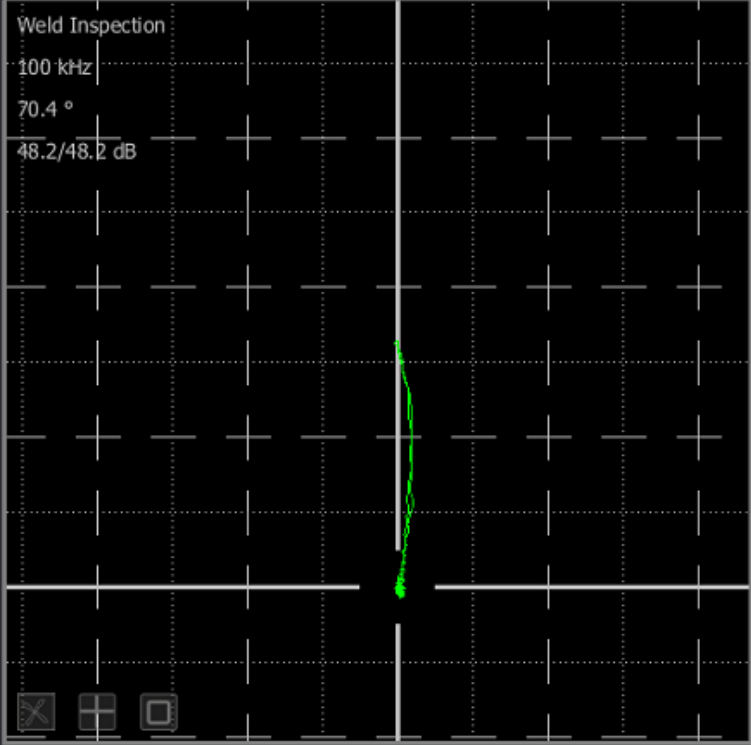
Step 1
Place the number of shims determined from the coating measurement step over the reference standard notches.

Step 2
Perform a "Null/Instrument Balance".

Step 3
Scan probe over 1.0 mm notch and adjust the signal (gain and phase) to be at 100% screen height on the vertical from the balance point.

WELD INSPECTION

Weld Inspection
100 kHz
70.4 °
48.2/48.2 dB



[X] [+] [□]

[Crosshair] [Snowflake] [Circle] [Menu] [Gear] [Home] [Camera] [Lock] [Grid] [Left Arrow] [Right Arrow]