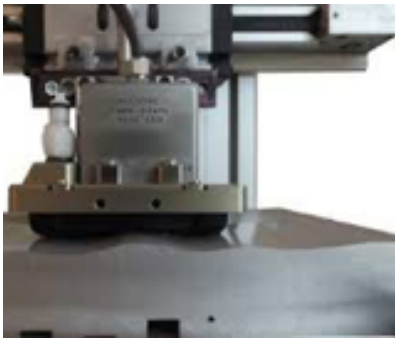
TFM/FMC ADVANCED ULTRASONICS

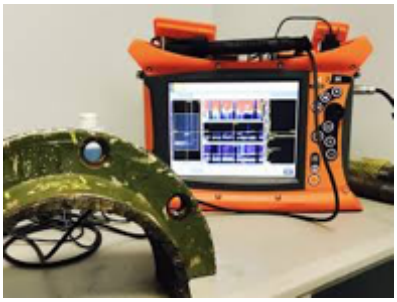
Phased-array technology has been accepted for many years and used in many NDE applications thanks to its flexibility and the major improvements in productivity. Instead of the typical amplitude vs time signal, phased-array systems can display ultrasonic data as sectoral or linear images (Sscan or Escan) allowing an inspector to instantly see a complete zone of the component and interpret the data more easily. Recent technology advancements have developed a portable system with Full-parallel Phased Array capabilities that allow real time TFM reconstruction which opens the way to new imaging techniques in the field.

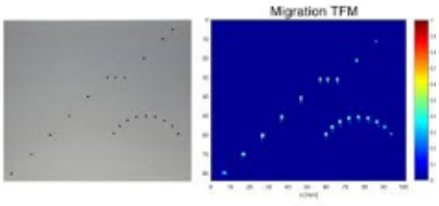
The TFM imaging technique can be applied to any acquired data; however in the Gekko it is applied to a dataset recorded from FMC (Full Matrix Capture) acquisition to produce an image in a region of the component. The FMC presents the advantage of maximizing the information available from a given array composed of N elements by sending ultrasonic energy everywhere in the component, this way the potential defects can be seen from multiple directions. The FMC acquisition consists in firing each element of the array in turn and recording the information diffracted in the component on all the elements.

ADVANTAGES OF USING TFM:

- Optimal focusing and spatial resolution everywhere
- Direct imaging of a large area for one probe position
- All reachable angles with the array simultaneously
- Defect Characterization
- Comprehensive imaging of defect
- 3D Imaging
- Immediate results of inspection
- Ability to inspect complex geometries (flanges, valve bodies, bolts, etc.)
- Customizable inspections







PHONE/WEB:

P: 866-347-7042
www.echonde.com

MAILING ADDRESS:

59 Burnt Park Drive
Red Deer, AB
T4P 0J7

CONTACTS:

DANNY JUTRAS: Business Development | DJutras@echonde.com
JEFF LEEDAHL: Managing Director | JLeedahl@echonde.com