



“FAST”™ ULTRASONIC TECHNOLOGY

FAST, or Flaw Analysis and Sizing Technique, is a single operation, multi-task ultrasonic examination technique. FAST was first developed to provide a US Nuclear utility with a less expensive and reliable ultrasonic examination technique. With FAST, detection, characterization, and through wall sizing of planar flaws is all accomplished at the same time. In addition to being faster, the reliability of FAST is superior to the traditional techniques when comparing operators of equal skill. FAST is now used in fossil power generation plants, in petro-chemical plants, on pipelines and in a variety of other industries.

FAST utilizes the 70° L-wave extensively. FAST is a way of using the positive attributes of the L-wave ultrasonic energy thereby reducing the confusion caused by the other wave modes that are present. The FAST technique simplifies the use of high angle L-waves thus allowing them to be used on a much wider variety of applications than was done previously.

FAST Technology’s greatest advantages are:

- Deep flaws can not be mistaken for geometry
- Geometric reflectors and interpretation problems associated with them are drastically reduced
- Thin walled materials are reliably examined

Other advantages of the FAST Technique over traditional ultrasonic techniques when comparing examiners of equal skill include:

- Decreased inspection time
- Increased reliability
- Reduced geometric indications
- Excellent for thin walled materials
- L-wave has better penetration in noisy material
- Less equipment
- Less calibrations and less calibration blocks
- Sizing and detection at same time
- Flaw orientation minimally affects sizing results
- Detection is independent of signal amplitude
- Examinations are repeatable between examiners
- Sizing of surface flaws such as SCC
- Reliable single side detection
- Proficiency in detection and sizing with 40 hour course

PfINDE, LLC

Pfannenstiel Innovative Non Destructive Examinations, LLC
166 Ingham Hill Road, Old Saybrook, CT 06475
www.pfinde.com - 860.830.4990 - Info@Pfinde.com