



SPECIAL NDT METHOD SERVICES

LEAK TESTING



A number of methods, ranging from visual inspection to detection by complex instruments, are available to check the tightness of joint and the soundness of welds in location where even very small leaks might be dangerous or undesirable. The more sensitive leak testing methods measure leaks as small as $1 \cdot 10^{-12}$ atm cc/sec.

At present we offer some techniques of leak testing for vessels chemical installation, fuel tank and welds:

- halogen detection - sensitivity - $1 \cdot 10^{-7}$ atm cc/sec
- pressure decay - sensitivity $1 \cdot 10^{-4}$ atm cc/sec
- fluorescent tracer liquid $1 \cdot 10^{-4}$ atm cc/sec
- bubble testing - sensitivity $1 \cdot 10^{-3}$ atm cc/sec

BOND TESTING OF COMPOSITES MATERIALS

BTW Instytut Gamma also offers special NDT techniques which support the Zetec tester MIZ-21SR for detecting impact damages, disbonds, delaminations and other anomalies in honeycomb and composite materials.



Sondicator technology uses a dual element piezoelectric transducer to transmit and receive sound waves into composite materials. Any disbond or delamination within the inspection zone attenuate the sound waves and an experienced technician can interpret and determine the location and relative size of the disbond condition.

Resonance technology is a closely related ultrasonic inspection but in a lower frequency. Variable frequency monitors the impedance changes of the contact transducer's piezoelectric element. Small variations in the tested structure like disbonds affect the phase and amplitude of the signal on an LCD screen.

