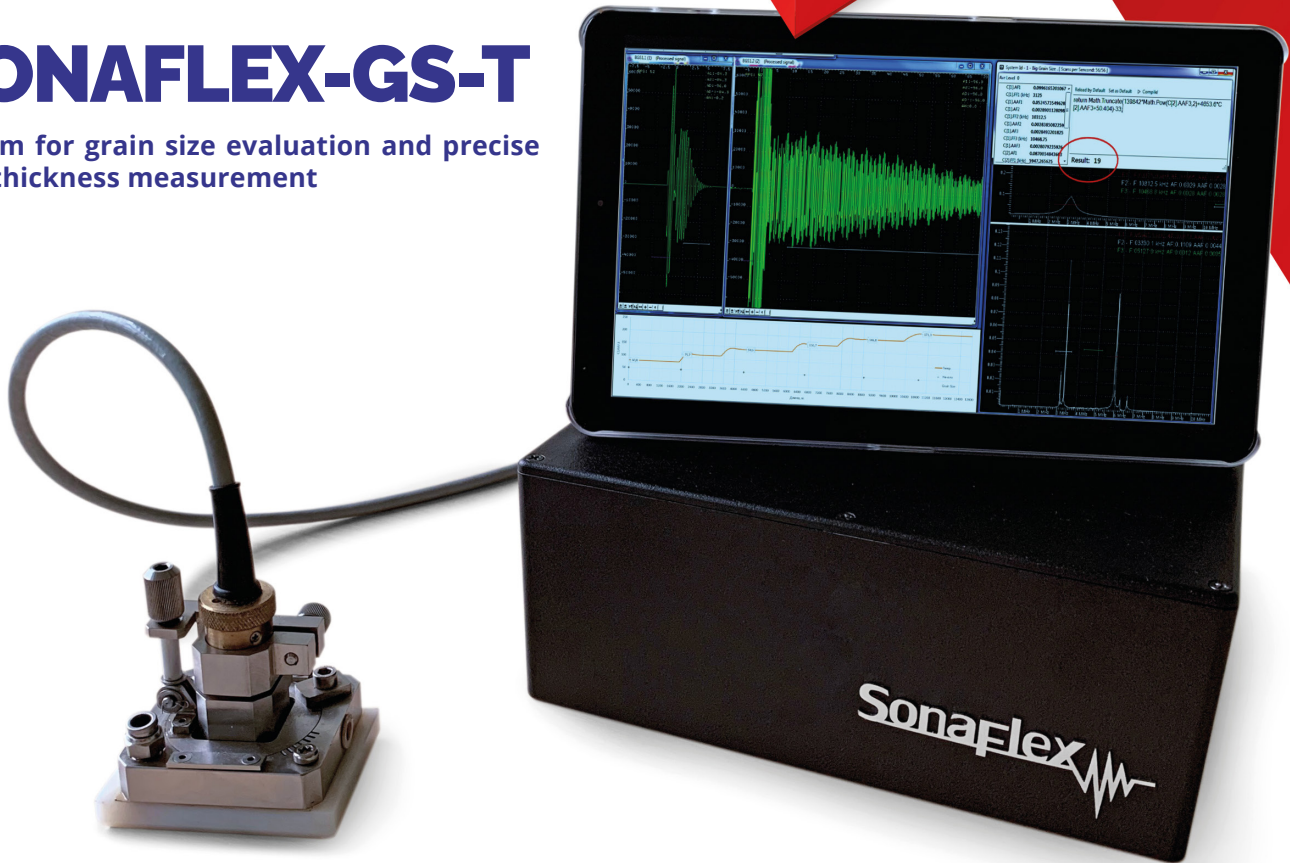


SONAFLEX-GS-T

System for grain size evaluation and precise wall thickness measurement



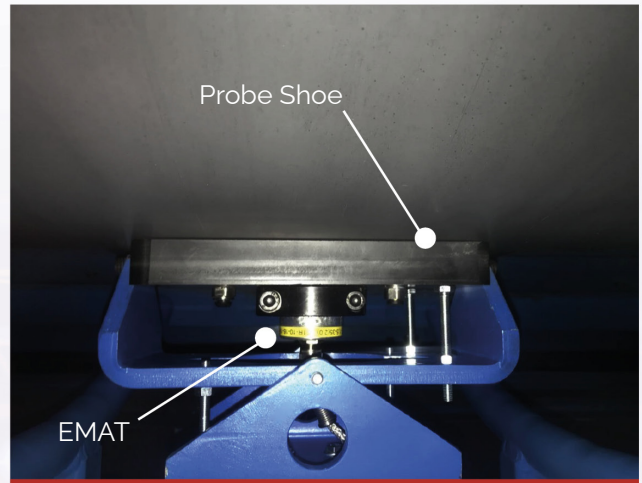
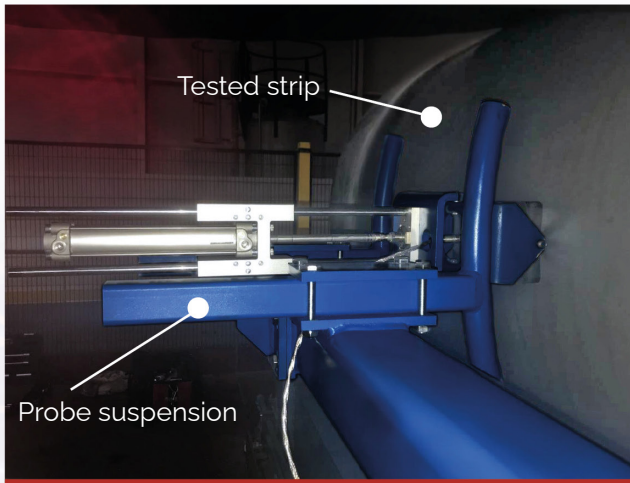
Obtaining information of the average dimensions of grains in thin plates or coils is an essential task of any steel plant's quality management. Grain size can substantially affect a material's properties, such as: strength, ductility, its performance under machining, forming, bending, welding, etc.

All steel makers are familiar with the routine job related to obtaining samples, polishing them, and then measuring grain size in the laboratories by means of microscopes. and car makers all over the World.

Nordinkraft (NK) has developed a compact and sophisticated gauge named "SonaFlex-GS-T" for automatic, non-contact in-line monitoring of the grain size of materials in the form of coils, bands, sheets, and plates. The gauge also can be used in laboratories, saving time while improving financial and human resources utilization related to sampling and grain size measurement with a microscope.

"SonaFlex-GS-T" is based on advanced, non-contact EMAT technology, patented by NK, allowing a single, very precise, full, quick and convenient measurement. It is a very compact instrument and can easily be integrated into any production line. The EMAT-probes do not require liquid couplant nor direct contact with the test object. The EMAT will never scratch the material being tested.

Example of Sonaflex-GS-T integrated into the Customer's production line



Potential Applications:

"SonaFlex-GS-T": For accurate in-line wall-thickness measurements, and for detecting laminations. The wall thickness measurement offers precision of up to 2 – 5 μ . With such precision thickness measurement, "SonaFlex-GS-T" can be implemented as a safer and environmentally cleaner alternative to X-Ray thickness measurement.

"SonaFlex-GS-T": For the in-line monitoring of bi-metals (Clad) during production or secondary processing. EMAT is very sensitive to the state of adhesion between the layers so poor cladding or areas of disbond can be detected with ease.

The temperature range of the tested material may be from minus 300 C to about plus 300 C, its speed can be up to 20 m/s. The total weight of the equipment is about 40 kG.

In its minimal configuration, "SonaFlex-GS-T" consists of:

- Electronic Box.
- EMAT – a non-contact device for generating and receiving ultrasonic vibrations.
- Industrial PC (a notebook) with sophisticated software.
- Set of cables.

Upon request, the number of EMATs may be increased to up to 8 units. Support for integration of "SonaFlex-GS-T" into a particular production line including the respective engineering, supply of the relevant supplementary equipment which may be the levers, fixtures, pneumatics, elements of control system, etc., can be provided as part of a "Turn-key" offer from NK, as we typically provide for larger systems.

"SonaFlex-GS-T" can be easily shipped for laboratory use as well. In most of cases the monitoring of Grain Size and wall thickness measurement can be performed simultaneously.

NORDINKRAFT AG

Schauinslandstr. 16
75196 Remchingen, Germany

Tel.: + 49 72 32 - 31 33 5-0
Fax: + 49 72 32 - 31 33 5-199
E-mail: info@nordinkraft.de

