

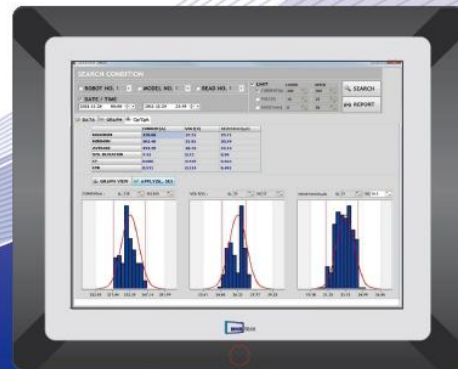
02

Intelligent welding monitoring system

Model WET-4000SI

NUT & BOLT Projection

Patent No. 10-1390385



Monitech co.,ltd.
www.monitech.co.kr



Main Features

- World's best system built with quality evaluation function for an individual welded joint performed by intelligent real time welding quality estimation algorithm that starts operating upon the very high precision sampling on welding waveform is made. (Patent registered and commercialized first in the world)

System Overview

High-speed
sampling



Signal
processing



Pattern
analysis



Individual welded joint
quality estimation



Output

Benefits

- System we provide is an innovative intelligent monitoring system providing users with test results indicating "NG" or "GOOD" with accuracy of more than 95% upon completing the welding of the nut and bolt on each individual welded joint, unlike an ordinary case using average values in F/Proof management system, in which the management of the upper and lower limits to the output values of welding process is available but the quality control on each individual welded joint is inadequate.

Applications



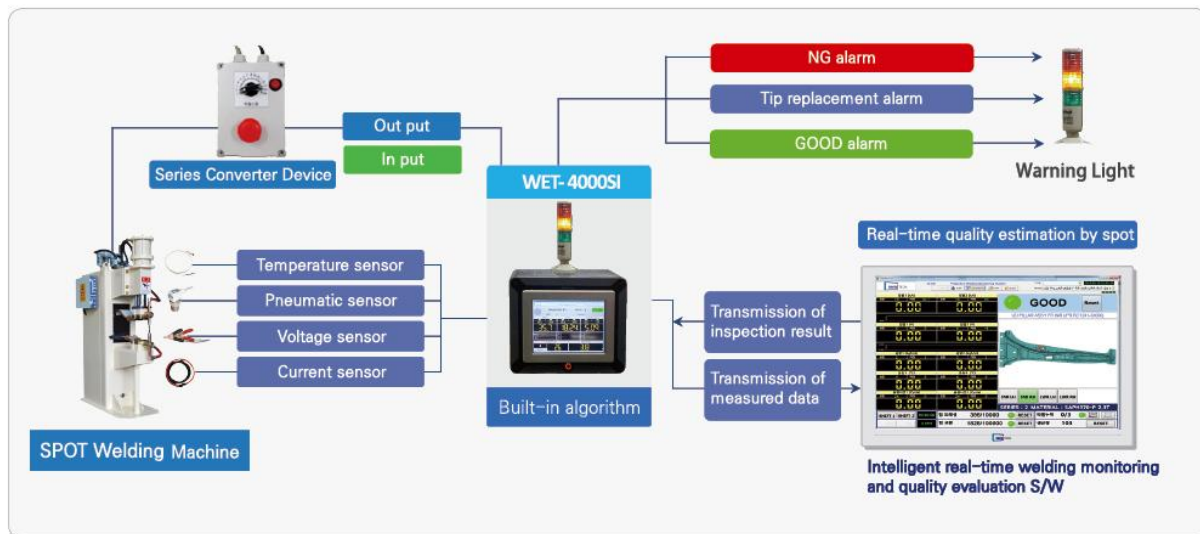
Automobile

- Nut and bolt projection (M6, M6 and M10), ring projection, cup projection welding, etc.

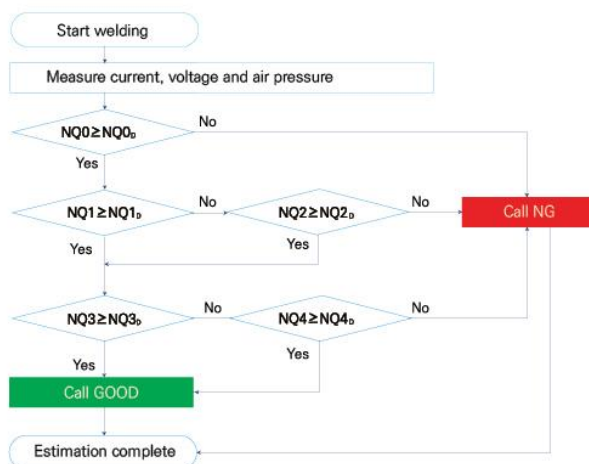
Application case



Basic Configuration of Nut & Bolt Projection Welding System



Quality estimation Algorithm Flowchart

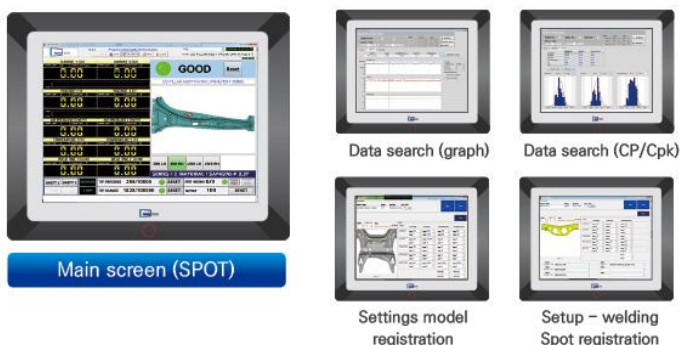


Example of Real-time Welded Joint Quality Inspection Algorithm

Examples of the real-time welding defect detection ability

Item	Type of Failure	Ability to determine failure	
		Common monitoring (No algorithm)	Intelligent algorithm
Nut	Nut upside down	10% or less	95% or higher
	Nut re-welded		
	Nut missing		
Bolt	Bolt missing	10% or less	95% or higher
	Missing bolt emboss		

S/W Main Screens



Main Clients



Real-time welding quality control and inspection solution

Real-time welding monitoring system

- 01. Welding quality monitoring system (ARC/SPOT/TIG)
- 02. Intelligent welding monitoring system (NUT & BOLT Projection welding)
- 03. Welding calibration master equipment (ARC/SPOT/DUO)
- 04. MICRO SPOT welding monitoring system
- 05. High speed thermal imaging welding monitoring system
- 06. Ultrasonic welding monitoring system
- 07. Laser welding monitoring system

Welding process measurement and equipment

- 08. Welding force measuring gauge (FORCE)
- 09. Current and force gauge (HANDY)
- 10. Advanced current and force gauge (HANDY PRO)
- 11. Measuring analyzing equipment for WPS/PQR (WPS)
- 12. Welding waveform analysis management equipment (MULTI)

Inspection and integrated monitoring S/W

- 13. Integrated management and control system (MIS)
- 14. Inspection record computerized management system for the Initial, middle, and final products (IM)



Monitech co.,ltd.

ISO 9001 / ISO 14001 / INNOBIZ / Venture

Head office / R&D Center

92, Saebyeoksijang-ro, Sasang-gu, Busan,
46987, KOREA
Tel. +82-51-311-8691
Fax. + 82-51-311-8692
E-mail. monitech01@naver.com
Homepage www.monitech.co.kr
Blog. <http://blog.naver.com/yuria85>

Seoul branch / R&D Center

304, Sanjeong building
23, Gukhoe-daero 66-gil,
Yeongdeungpo-gu, Seoul,
07237, KOREA
Tel. +82-2-780-8691
Fax. +82-0303-0953-0954
E-mail. monitech2@naver.com