



Robots Moving Freely Enabling Automated Welding of Large Structures

FD-VC8/AiTran500/The Short Arc

<Reasons for Robot Introduction>

- Labor shortage and skilled worker shortage
- Variability in welding quality due to skilled worker technical proficiency levels

Addressing Labor Shortages and Stabilizing Welding Quality Through Robot Implementation

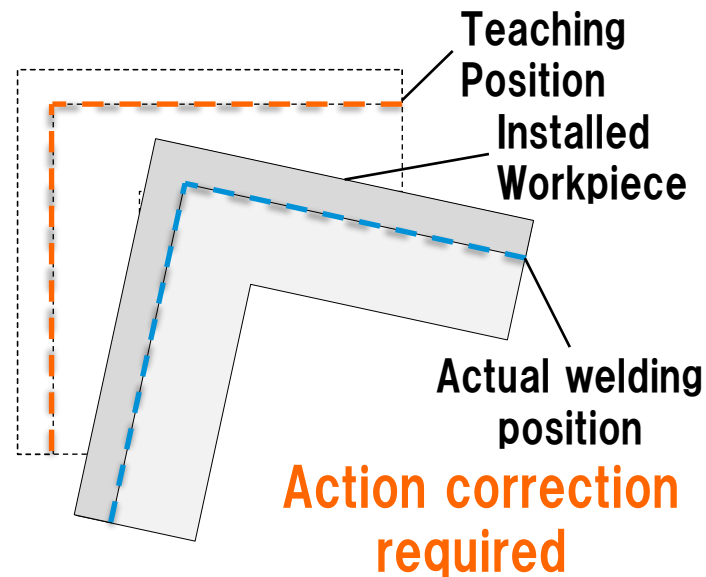
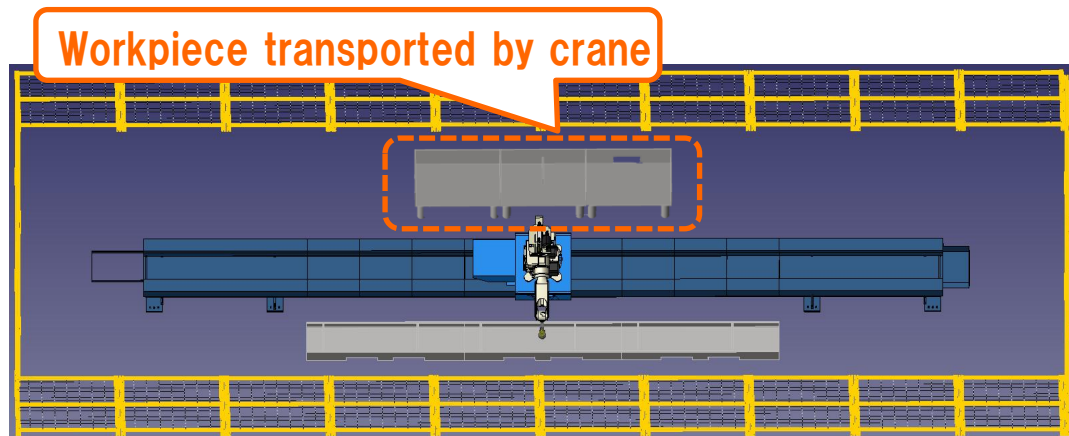
In reality... "Challenges exist in introducing robots for large-scale structures"



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- Precise workpiece positioning is difficult, requiring motion correction



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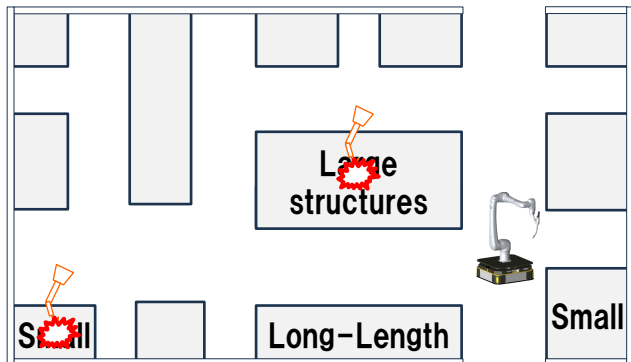


Daihen's mobile welding robots provide the solution !

Achieve flexible factory layouts with DAIHEN's mobile welding robots !



Factory Layout



■ All-Daihen Robot Systems

Developing transport robots and cobots
Daihen's unique robots that are safe
without safety fences

■ Flexible Factory Layout

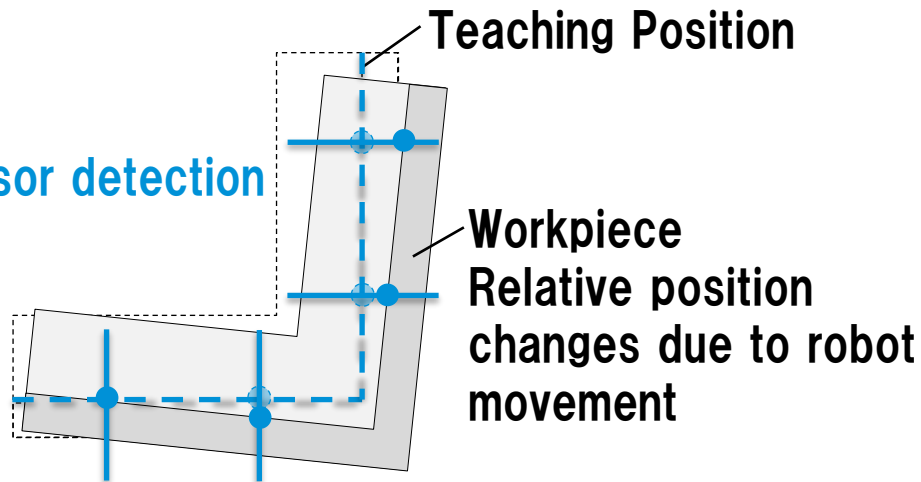
Robots move to the workpiece enabling
flexible workpiece placement !

Automatically recognize and correct workpiece shapes using laser sensors !

- Recognizes workpiece shape via laser sensor sensing before welding
- Corrects relative position and rotational misalignment between robot and workpiece



Laser sensor detection



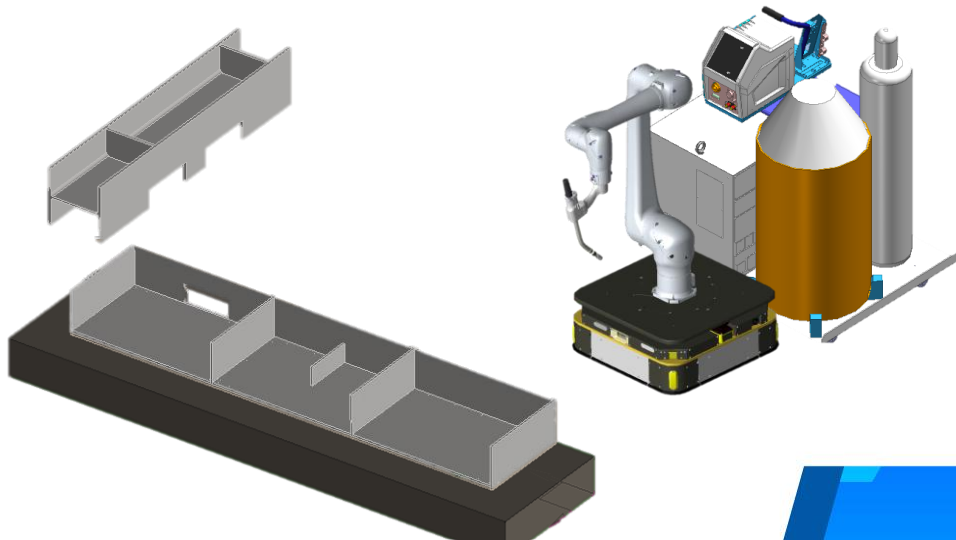
Autonomous Mobile Welding at Large Structural Welding Sites

STEP1: Robot autonomously navigates to the welding location

STEP2: Workpiece and shape detection using laser sensors

STEP3: Robot performs welding operation

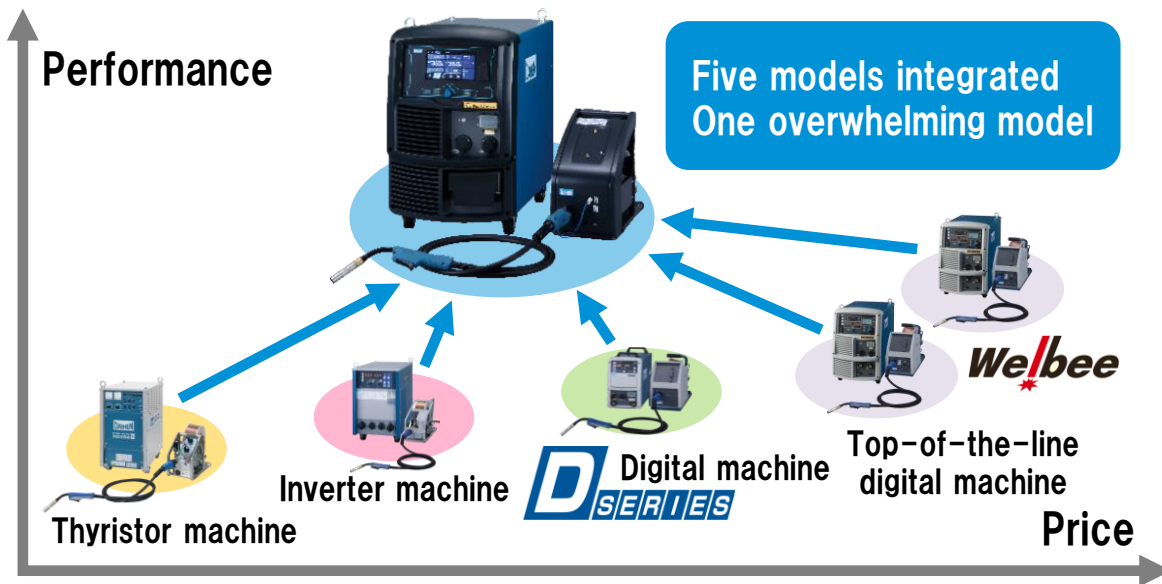
STEP4: Moves to the next welding location



We!bee The Short Arc

Low spatter, robustness, multifunction, cost advantage

The top-tier model that combines it all



For LCD panels
A higher level of usability



- **Rich functions to assist beginners**
Welding guide, welding advisor,
Management Functions,
Troubleshooting Guide, etc.
- **LCD screen for improved visibility and operability**
Language switching, simple display
mode and more

Daihen proposes enhanced production efficiency through new automated welding techniques for large structures using cobots and autonomous transport robots.

DAIHEN