DAIHEN

Innovative Manufacturing for Creating Large and Complex Parts

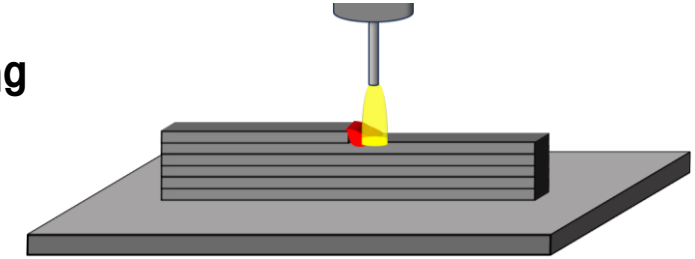
Wire Arc Metal 3D Printer : WAAM

2024 Japan International Welding Show

WAAM –Wire Arc Additive Manufacturing

WAAM Wire Arc Additive Manufacturing

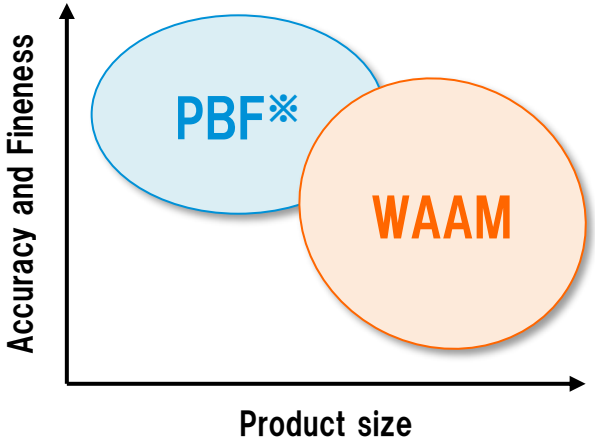
3D Metal printing technology that builds up arc welds to form shapes.



<Features>

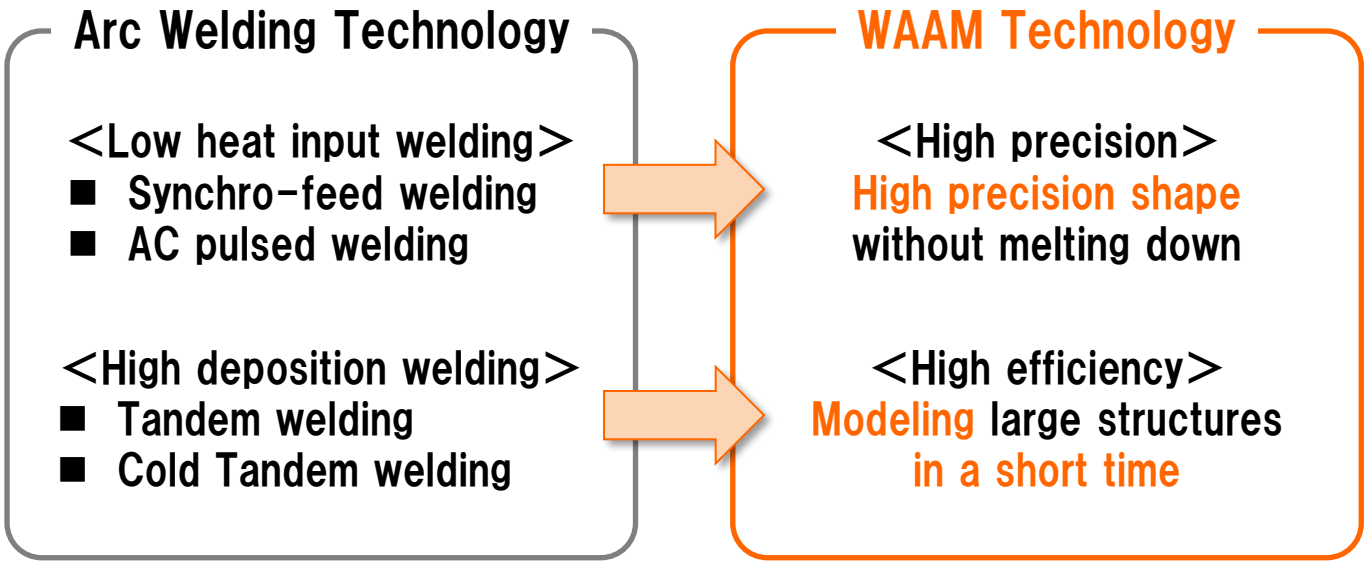
- Capable of manufacturing large parts
- Fast deposition speed
- Low price system

※Powder Bed Fusion



WAAM technology development

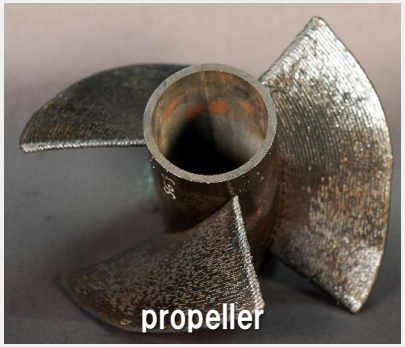
High-performance WAAM technology from DAIHEN arc welding technology



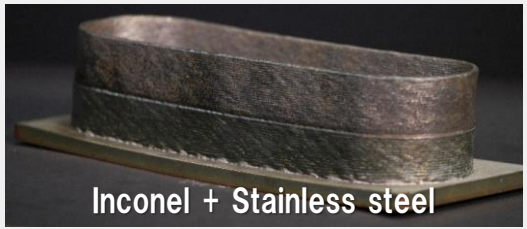
Example of WAAM production

Basic shape

Parts Manufacturing

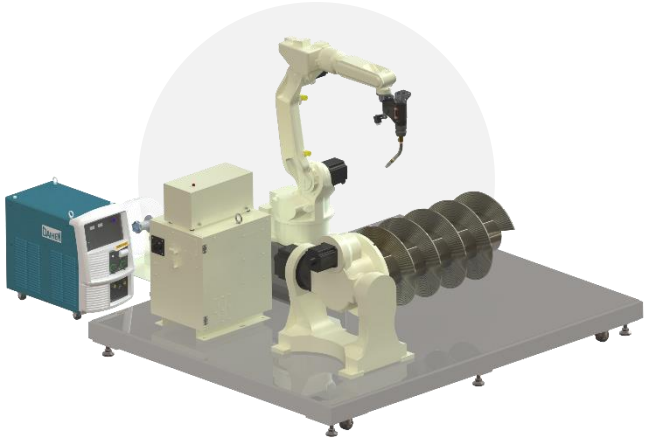


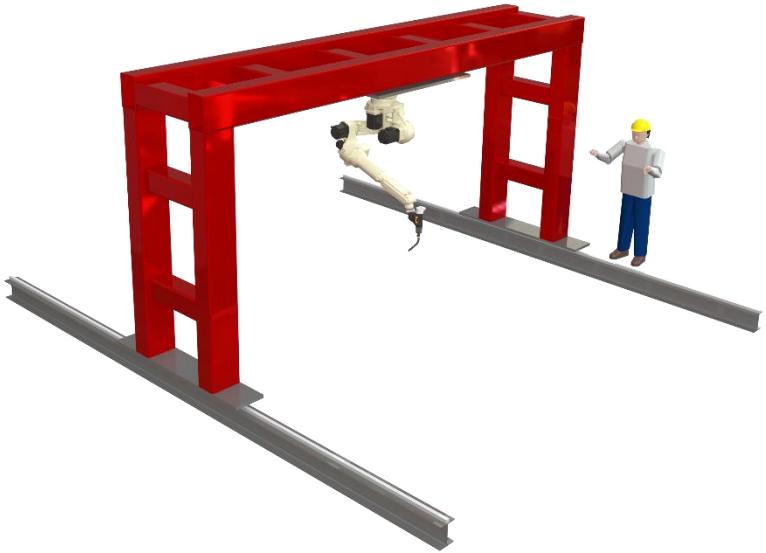
Dissimilar metal additive manufacturing



Development of WAAM system

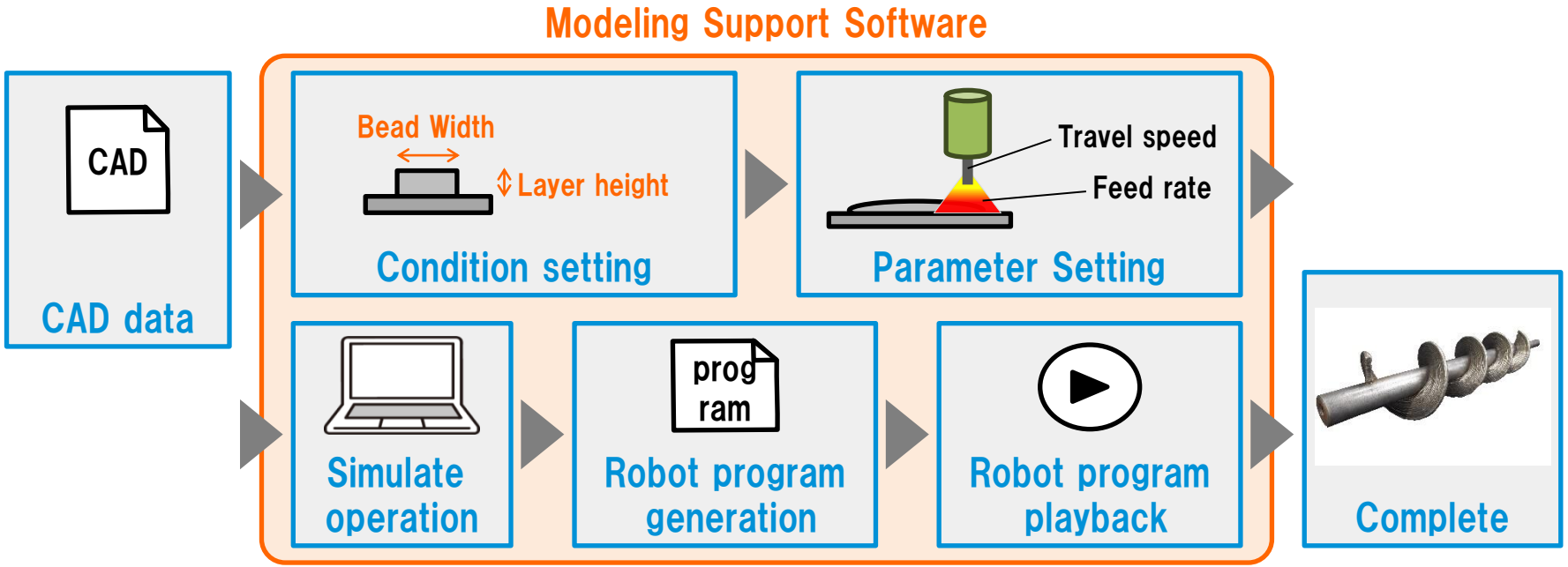
DAIHEN‘s ability of “robot control” and “systems build” produces parts of various sizes in WAAM.





Aiming for a device that anyone can use

Development of modeling support software only with CAD data and condition settings

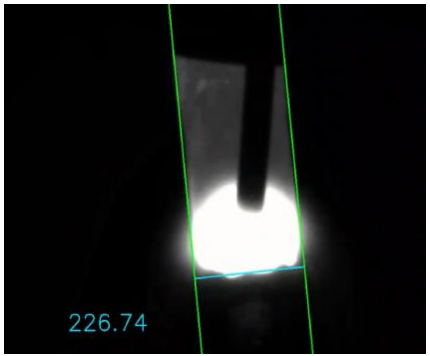


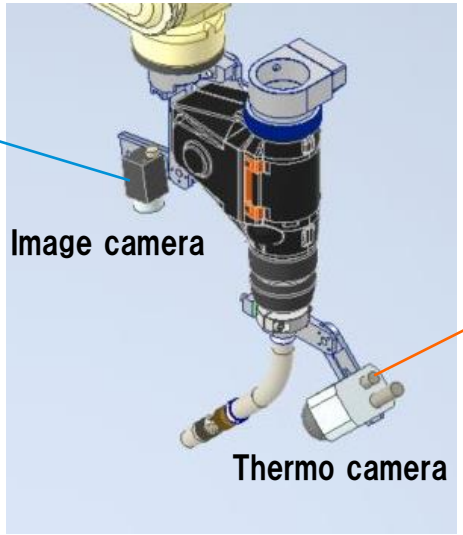
No need experience in welding or robot operation

Aiming for even higher performance

Development of Monitoring & Feedback technologies for WAAM conditions

Monitor: Molten Pool Width





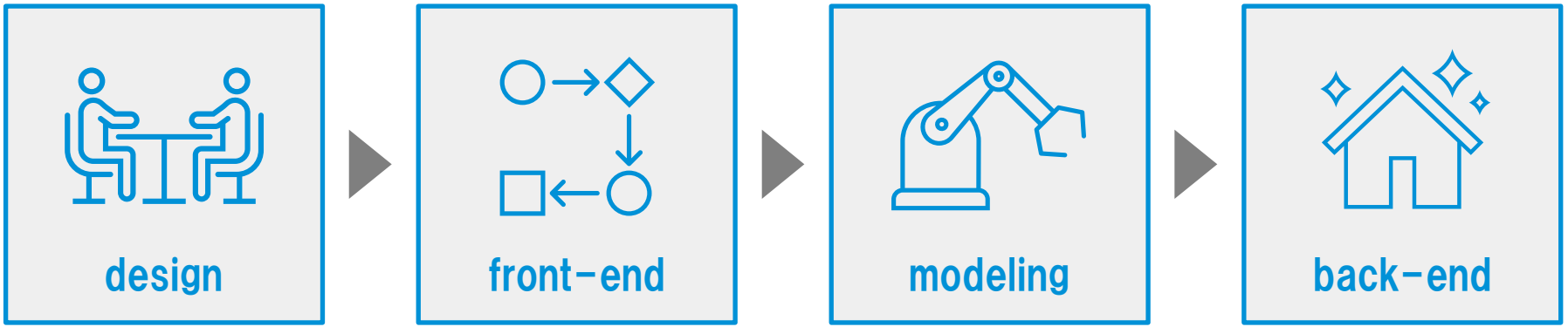
Monitor: Temperature / Feedback: EN ratio

Automatic adjustment of heat input according to bead temperature

⇨ High-precision modeling without manual adjustment

Services beyond the development of printing equipment

- Covers all processes involved in WAAM
- Prototype and build-to-order production



design	front-end	modeling	back-end
Design for AM	Robot path generation	High-speed/precision modeling	Surface treatment
Cost Analysis	Parameter Generation		Peening

Providing Japan's first One-stop WAAM service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