

# High Performance Ferritic Stainless Steel for Large-Scaled Washing Machines and Dryers

## Member Company

POSCO

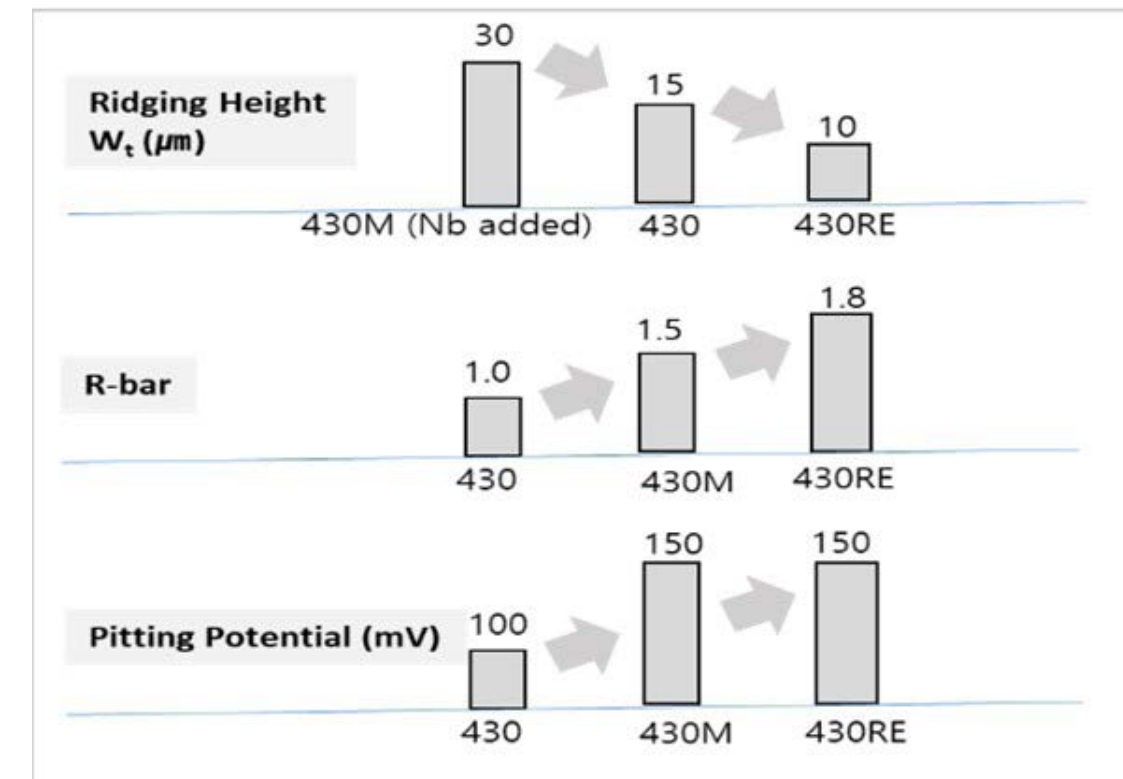
## Category

Significant global market potential (>2.0m tons)

## The Challenge

As washing machines and dryers become larger, consumers such as LG Electronics demand for us to make the material with excellent formability and good weldability with a competitive price.

1. The reduction of defect rate in 'Drum Rear' part after press processing.  
→ Excellent Formability (superior r-value as well as anti-ridging characteristics)
2. 'Drum Center' productivity must be improved by the change from 'Lock-Seaming' to 'Laser Welding'.  
→ Good weldability with a competitive



### Quality position

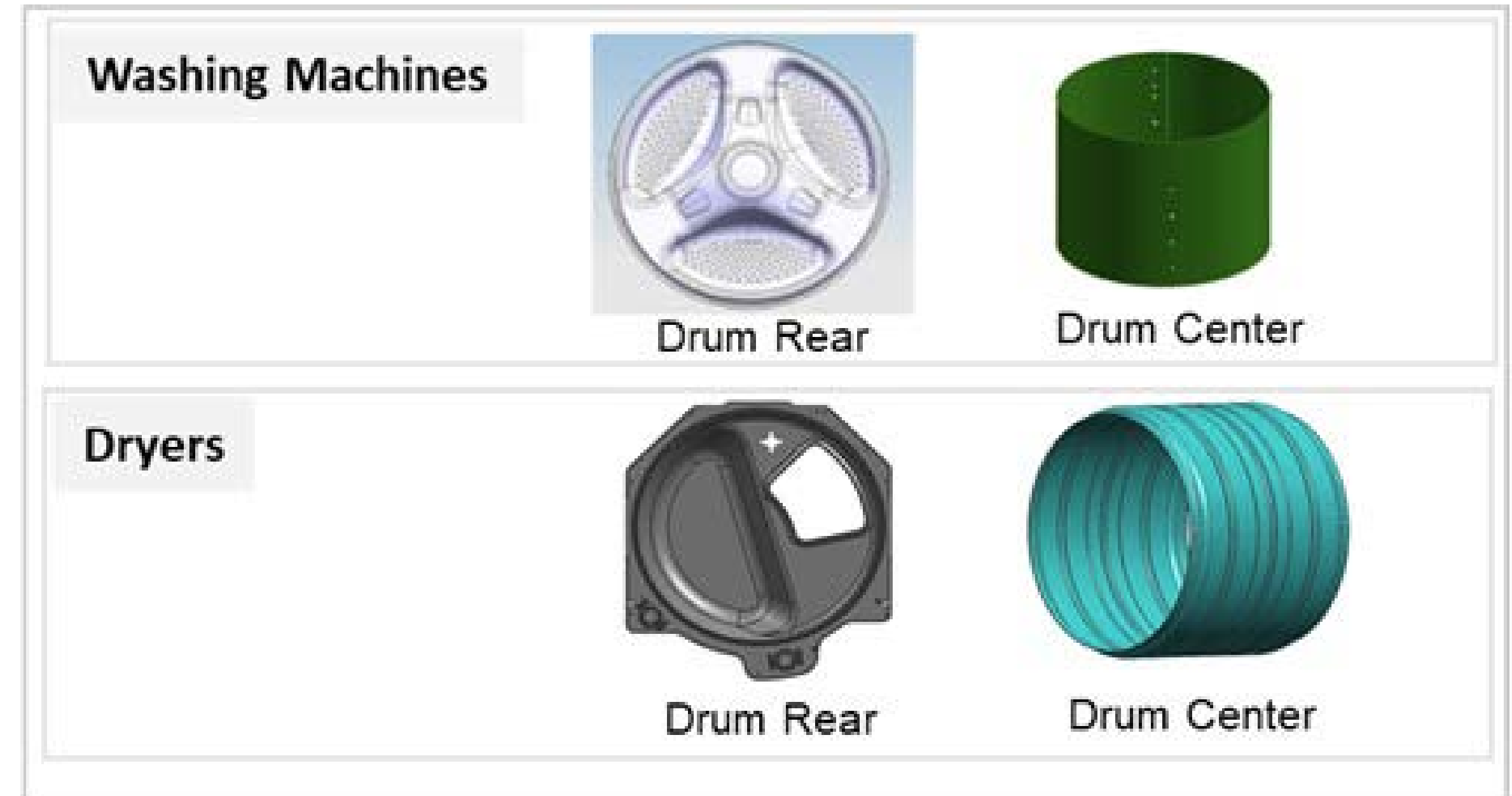
price.

### Why?

In response to the increased demand for premium appliances (large-scaled washing machines & dryers), POSCO needs a customer lock-in for our development.

### Needed Action

1. Competitive alloy design and process development (BAF (Batch Annealing Furnace) process omitted)



### Application of 430RE

2. Optimization of hot-rolling as well as cold manufacturing conditions for improved formability and lowering ridging.

### Action Review

**Specific;** 'Drum Rear' & 'Drum Center' of washers and dryers

**Measurable;** Ridging value ( $W_t$ ), r-value (r-bar), elongation (%), corrosion resistance in fastened part

**Achievable;** 430RE (Ridging Endurance) product is launched and expanded sales

**Realistic;** LG Electronics has adopted 430RE product and has been constantly purchasing it

**Time-bound;** From 2018 to 2020, POSCO successfully satisfied the demands of LG Electronics.

### Horizontal Expansion Capability

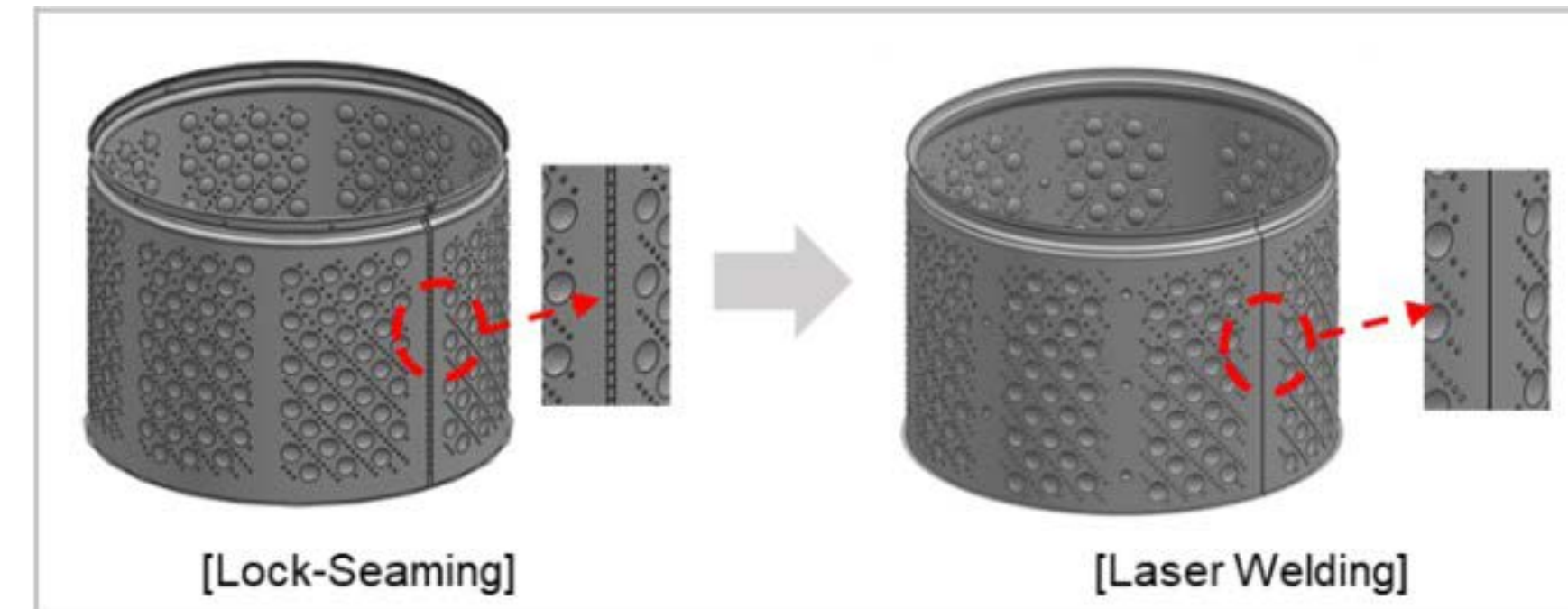
It can be applied to large scaled washing machines and dryers that require welding type.

It can be expanded into a global consumer electronics company.

### Outcome

On the POSCO side, the development of BAF-processed omitted product has enabled process cost reduction and CO2 reduction.

On the LG Electronics side, 'Drum Center' productivity is improved by the change from 'Lock-Seaming' to 'Laser Welding' as well as reduction of defect rate in 'Drum Rear'.



| The change of joint method in Drum Center



| The appearance of joint in Drum Center after corrosion test