Are you paying for unnecessary waste?

The Replicast® near net shape solution...

...eliminates this metal

...from this sand cast valve

...to give a 25% lighter casting.

Replicast® allows users to cut costs, waste and meet demand for tailor-made, high-integrity castings, weighing from a few grams up to 3.5 tonnes; whilst improving quality and dimensional accuracy at the same time.

The process replaces conventional wooden patterns with dimensionally precise replicas made from expanded polystyrene, dipped several times in special slurry and different grades of ceramic to create a solid, ceramic shell. The shell is significantly thinner than a traditional investment casting shell, but with the same excellent internal surface finish.

Shells are fired, removing the foam, put in casting boxes and surrounded with refractory sand. The sand is compacted on a vibrating table before a partial vacuum is applied to the sand to create a firm support for the shell, after which molten metal is poured in.

Benefits

• 25 per cent lighter castings
• 50 per cent less feed metal
• 40 per cent more castings per melt
• Reduced waste
• Improved machinability
• Consistently high dimensional accuracy

Features:

• Inert ceramic moulds reduces the possibility of hydrogen defects found with steel and nickel based alloy casting
• High as-cast integrity
• Excellent surface finish (3.2 – 7.6μin; 130 – 300μm)
ISO 8062 CT5 – CT8

For more information contact Will Jeffs to arrange a visit to see CTI’s Replicast® demonstration facility.

To find out how your company could benefit, contact:

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Valve image shown courtesy of Hopkinsons.