



SubCOR™

PRODUCT PLAYBOOK

Next Generation
Manufacturing Technology for
Improved SubArc Performance.



PRODUCT PLAYBOOK

80 SubCOR™ PRODUCTS

SubCOR™ EM13K-S MOD

AWS A5.17: EC1

SubCOR™ 92-S

AWS A5.23: ECM1/ECNi4

Metal Cored Wire for SubArc Welding

Improved Toe Lines, Feeding Consistency, and Bead Contour

Compatible with Single-Wire, Twin-Wire, Tandem, and New Hercules SAW Processes

DISCOVERY QUESTIONS

- Are you familiar with the advantages of Metal Core SubArc?
- Would you like to increase productivity and consistently get more parts out the door?
- Have you considered improvements in your submerged arc process? What technologies have you investigated?
- Would you be interested in a low capital solution?
- Are you struggling with part re-work due to burn-through?
- Are you struggling with balancing productivity with weld quality and/or appearance?
- Are you interested in maximizing the use of the submerged arc process in place of the GMAW and FCAW processes?
- Would you be open to displacing GMAW and FCAW to improve productivity and consistency?

WHERE TO TARGET

Segments

- Oil & Gas
- Pressure Vessel
- Utility Pole
- Under-Roof Confab
- Structural
- Ship Building

Recommended Applications

- Long Seam and Circumferential Welds
- Large-diameter circumferential welds
- Thick groove welds
- Lap joints and joggle joints
- Fillet weld sizes greater than or equal to 3/16" (1F or 2F)
- Sheet and thin-plate welding (3/16" and above)

Not Recommended for:

- Square-groove welding when weldment thickness >5/16"
- Joint designs requiring deep narrow penetration
- Circumferential welding of weldment diameters <10"
- Out-of-position welding

PAIN POINTS

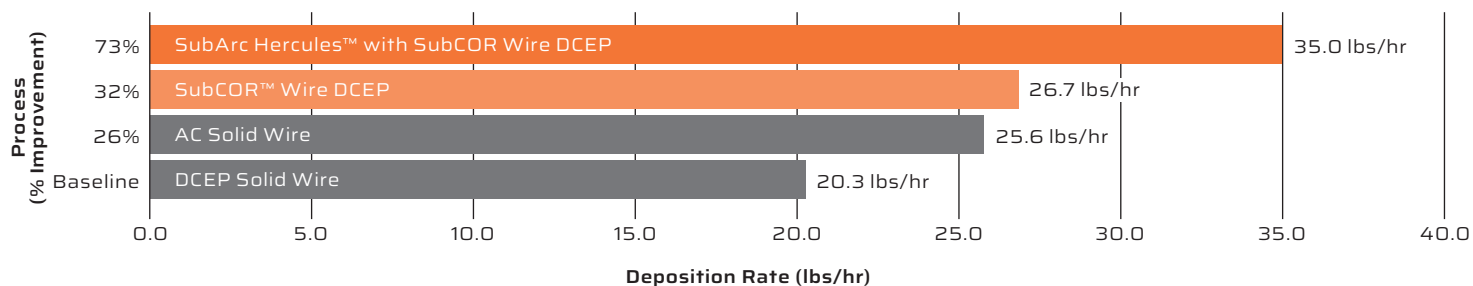
- Struggling to balance travel speed with penetration profile.
- Productivity lower than company goals and objective
- Maxed out deposition rate on existing equipment
- Funding capital and equipment lead times
- Stuck doing the same old thing, need for continuous improvement

VALUE PROPS

- Industry leading productivity with the opportunity to reduce weld passes and increase travel speeds for improved overall throughput
- Mechanical properties equal to or better than solid wire alternatives with a wide range of Hobart fluxes
- A more forgiving process: improved handling of thin metal and fit-up
- The only recommended filler metal type for the SubArc Hercules™ process
- Relatively quick implementation: utilize existing equipment

DEPOSITION RATE COMPARISON

5/32" dia Electrode 700 amps 34 volts



WHY IS SubCOR DIFFERENT?

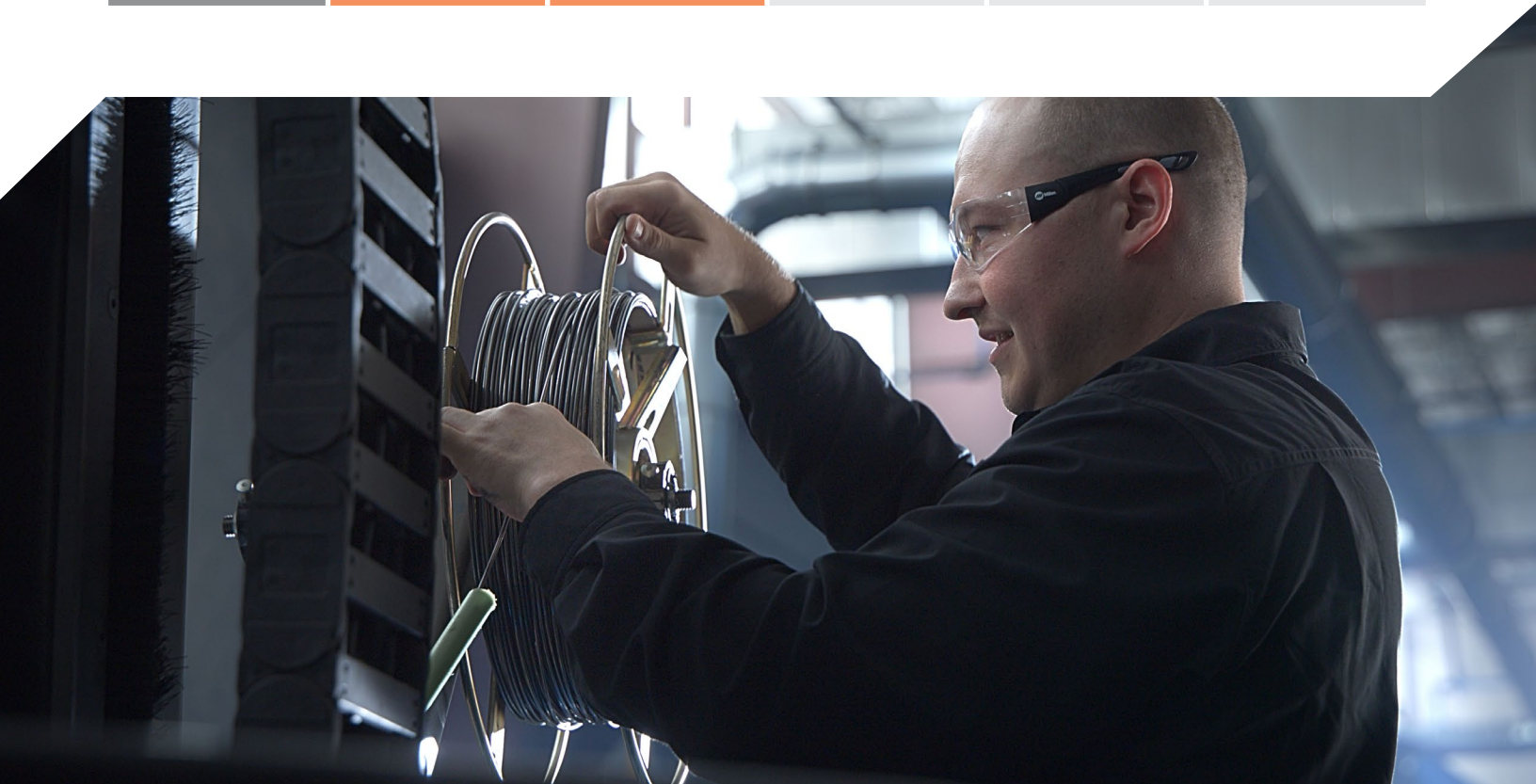
	GOOD Solid Wire	GOOD+ Solid Wires + AC	BETTER SubCOR Wires	BEST SubCOR Wires + Hercules™
Deposition Rate	Good	Better 26% Improvement	Best 32% Improvement	Best+ 73% Improvement
Penetration Profile Control	Little Control	Improved Control	Improved Profile	Improved Control and Profile
Ease of Implementation	No Additional Capital Expense	Sizable capital Expense	No Additional Capital Expense	Minimal Capital Expense



SubCOR PORTFOLIO

WHERE TO USE WHAT

	SubCOR™ EM13K-S MOD	SubCOR™ 92-S	SubCOR™ N1-S	SubCOR™ 100F3-S	SubCOR™ 120-S
Wire Type	Carbon Steel	Low-Alloy	Low-Alloy	Low-Alloy	Low-Alloy
Classified Tensile Strength	70 ksi	80 KSI	70 ksi	90-100 KSI	110 KSI
Common Market Segments	Heavy Equipment, Pressure Vessel, Oil & Gas, General Fabrication, and ConFab	Utility Pole, Bridge, and Weathering Applications	ConFab, Heavy Equipment, Weathering Applications and Bridge	Bridge, Offshore, Heavy Equipment, and ConFab	High Strength Low Alloy Pressure Vessels, ConFab, and Heavy Equipment
Compatible Hobart Flux	HA-495 HN-590 SWX 120 SWX 150 HN-521	HA-495 HN-590 SWX 150 HN-521	HN-590 SWX 150 HN-521	HN-590 HN-521	SWX 150 HN-521
Data Sheet					



FLUX OVERVIEW

	HA-495*	HN-590	SWX 120	SWX 150	HN-521
Neutrality	Active	Neutral	Neutral	Neutral	Neutral
Basicity	Very Low	Low	Moderate	High	High
Productivity (Travel Speed)	Highest	Higher	High	Nominal	Nominal
Toughness	Lowest	Nominal	Higher	Highest	Highest
Applications	High-speed 1-2 pass welds	General purpose use	General purpose use with enhanced toughness	Demanding applications & low-alloy wires	Demanding applications & low-alloy wires
Key Industries	General Fabrication, ConFab	General Fabrication, ConFab, Heavy Equipment, Storage & Pressure Vessel	Heavy Equipment, Storage & Pressure Vessel	Heavy Equipment, Pressure Vessel, Offshore Fabrication	Heavy Equipment, Pressure Vessel, Offshore Fabrication

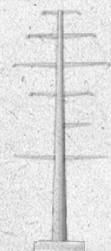
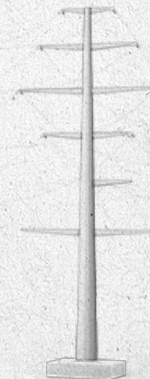
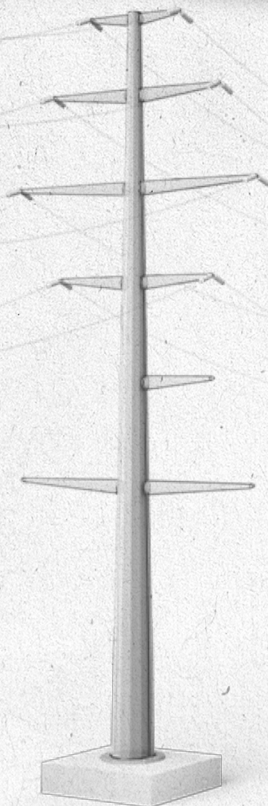
These suggestions are for general-purpose applications made by considering flux properties and EN ISO classifications. Due to difference in formulations between manufacturers, different fluxes having similar classifications may have noticeably different welding characteristics and suitability for a particular application. ALWAYS CONSIDER THE WIRE/FLUX COMBINATION WHEN SELECTING WIRES AND FLUXES FOR USE IN ANY APPLICATION! We strongly advise further discussion of your applications with Hobart's technical specialists.





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AT THE CORE OF EVERY GREAT WELD



For further information and questions please call our
Applications Engineering Hotline: 1.800.532.2618 or email
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