


# LINCOLN ELECTRIC MECHANIZED PIPELINER<sup>®</sup> AUTOSHIELD<sup>®</sup>



High strength welds with low hydrogen deposits are critical on X65 and X70 pipe in the demanding pipeline industry. Lincoln Electric's AutoShield<sup>®</sup> self-shielded pipeline welding solution delivers the quality and productivity you need to compete. Designed to weld fill and cap passes without shielding gas on a mechanized orbital system, the AutoShield pipeline welding solution can improve productivity and lower heat input without the added costs associated with flux-cored gas-shielded on the right of way.

## AUTOSHIELD VS. FCAW-G

 **ZERO** shielding gas or shacks required

 UP TO **50%** REDUCED heat input

## AUTOSHIELD VS. EXX45 STICK ELECTRODE

 UP TO **30%** REDUCED weld time

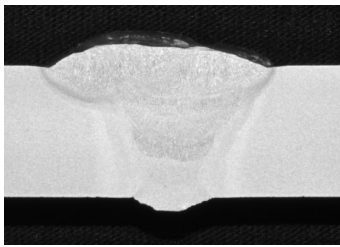
 UP TO **80%** DECREASE in weld start/stops

## WELDING CHARACTERISTICS

- » Designed for X65 and X70 pipe vertical down
- » Diffusible Hydrogen: < 8mL/100g
- » Minimum Tensile Strength: 90 ksi (620 MPa)
- » Minimum Yield Strength: 78 ksi (540 MPa)

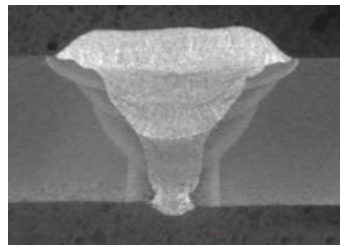


## MINIMIZE THE HEAT AFFECTED ZONE WITH AUTOSHIELD



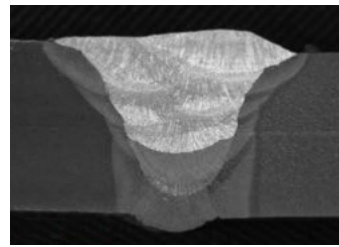
### AutoShield

24 kJ/in  
(0.9 kJ/mm)



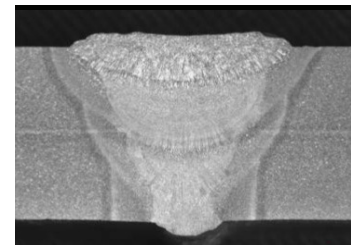
### Mechanized FCAW-G

50 kJ/in  
(2.0 kJ/mm)



### Cellulosic

45 kJ/in  
(1.8 kJ/mm)



### EXX45 SMAW Electrodes

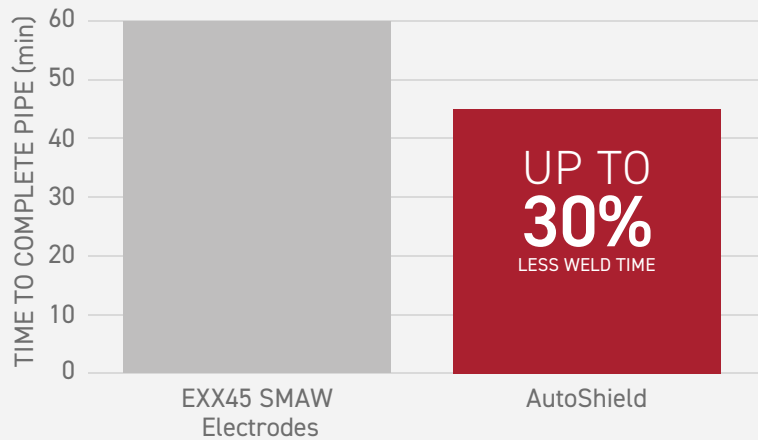
30 kJ/in  
(1.2 kJ/mm)

## IMPROVE PRODUCTIVITY

Productivity comparison of EXX45 SMAW electrodes vs. Mechanized AutoShield including cellulosic root and hot passes

20 in (508 mm) diameter

.500 in (12.7 mm) wall thickness

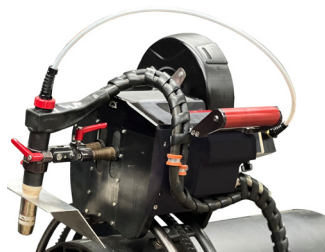


## SOLUTION COMPONENTS



### Power Source

Power Wave® S500  
Frontier™ 400X Pipe



### Orbital Solutions

APEX® Controller  
HELIX® M85 Weld Head



### Filler Metals

Pipeliner® AutoShield HW

#### Test Results Disclaimer

Test results for mechanical properties, weld deposit, heat input, and travel speeds were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Actual results may vary depending on many factors including, but not limited to, the welding consumable type, waveform, weld procedure, base material, joint design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

#### Customer Assistance Policy

The business of Lincoln Electric is manufacturing and selling high quality welding equipment, automated welding systems, consumables, and cutting equipment. Our challenge is to meet the needs of our customers, who are experts in their fields, and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or technical information about their use of our products. Our employees respond to inquiries to the best of their ability based on information and specifications provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment, or to provide engineering advice in relation to a specific situation or application. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or communications. Moreover, the provision of such information or technical information does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or technical information, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose or any other equivalent or similar warranty is specifically disclaimed.

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Reach out to us for more information at: 1-888-935-3877

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