

SmartDress

R4S FP7

Amanda Allison



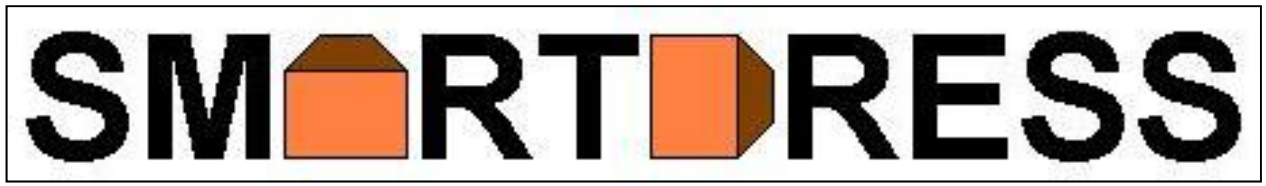
Materials Joining and Engineering Technologies

SmartDress Project

Deterioration of electrode tip quality responsible for the majority of down time in automotive assembly lines

Reduced frequency of electrode tip changes improves profitability

Slow and costly optimisation of electrode tip dressing during line start-up up phase



Monitoring system:
- Senses electrode tip wear
- Initiates tip repair
- Signals damage to tip dresser

New dresser development for minimal material removal during dressing

Learning operation mode automatically optimises tip dressing schedules during line start-up

Copyright © TWI Ltd 2014

Partners and roles



Copyright © TWI Ltd 2014

Summary

- Initial results with the SmartD… indicate that up to 3 times as many… be made with a single pair of electr… coated steels
- Thi… real terms pair of electrodes can last up to 3… duction shifts
- SmartDress can help enable economical high volume spot welding of aluminium

The first systems were sold Spring 2014

Two Patent applications:

- Control system – EP 2013/069034
- Optical device - EP 2013/0662201



SmartDress at Schweissen & Schneiden 2013

Copyright © TWI Ltd 2014

Project Video



http://youtu.be/F386STZRo08

Copyright © TWI Ltd 2014

Amanda Allison

EU Initiatives & Funding Developer
Joining Technologies Group

E: amanda.allison@twi.co.uk

TWI Yorkshire
AMP Park
Wallis Way
Rotherham
S60 5TZ
UK

T: +44 (0)114 2699046
W: www.twi-global.com

Materials Joining and Engineering Technologies

Copyright © TWI Ltd 2014