

DRY STEAM PROCESS FOR THE CONTINUOUS CLEANING OF STRIPES, WIRES AND BANDS

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Certificate delivered by the European Commission, as the institution managing Horizon 2020, the EU Framework Programme for Research and Innovation 2014-2020

#### The project proposal 735311, STEAMLINER

Compact and environment friendly steam cleaning system for this continuous steel, alloy, ferrous and non-ferrous products (wires, cables, stripes, cords)

Submitted under the Horizon 2020's SME instrument phase 1 call H2020-SMEInst-2016-2017 (H2020-SMEINST-1-2016-2017) of 3 May 2016

in the area of Accelerating the uptake of nanotechnologies advanced materials or advanced manufacturing and processing technologies by SMEs

> REA Steam Cleaning set Via Traviso 36 10149 Totian Italy

following evaluation by an international panel of independent experts

WAS SUCCESSFUL IN A HIGHLY COMPETITIVE EVALUATION PROCESS\* AS AN INNOVATIVE PROJECT PROPOSAL

This proposal is recommended for funding by other sources since Horizon 2020 resources available for this specific Call were already allocated following a competitive ranking.

> \* This means proving of uningent Harizon 2020 extensions the should be the 1 second uniness may, separat, quality and efficiency of implementation) suggested to success families from the HC budget Harizon 202

Corina Crețu, Commissioner for Regional Policy Carlos Moedas, Commissioner for Research, Science and Innovation

Crete

Brussels, 21/06/2016







- A very simple, reliable process
- The cleanising fluid is always fresh and clean
- Very low quantity of waste water
- Suitable for speed up to 60 m/mn
- Cleaning, degreasing and drying in a single tool
- Very small footprint of the cleaning tool (approx. 50 cm)
- No contact between the stripe and the cleaning tool
- Versatile system : mobile tool with interchangeable cleaning chamber (toolfree)
- Final cleaning result up to 38 mNm (superficial tension)



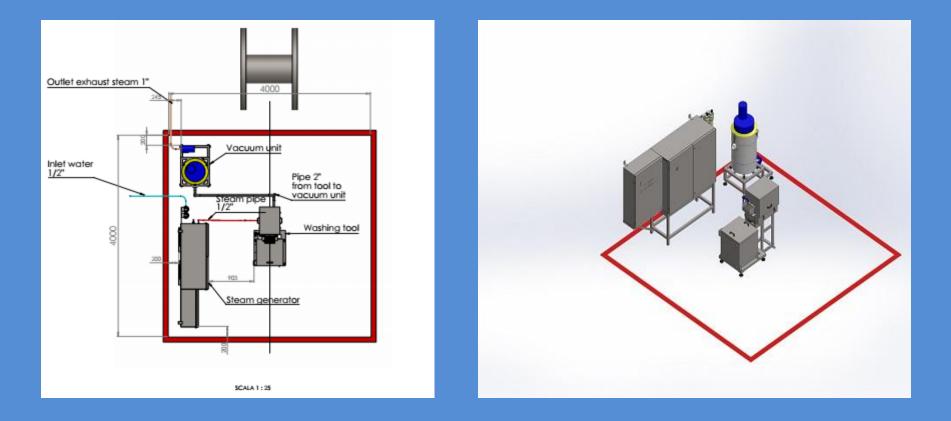
Temperature (110°) + pression (10 bars) + suction = the stripe is perfectly degreased, microparticles are removed , the surface is dried , all in a single, compact tool

• Pollutants ( oil, grease, particles ) are removed from the surface by the combined action of temperature and pressure

• Steam that forms into the washing chambers, as well as condensed water with pollutants, are continuously vacuumed and accumulate in a tank with automatic discharge



### DRY STEAM PROCESS FOR THE CONTINUOUS CLEANING OF STRIPES



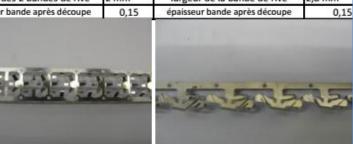
The complete system is modular, steam generator and vacuum unit can be remoted from the cleaning tool : easy to fit on any existing production line

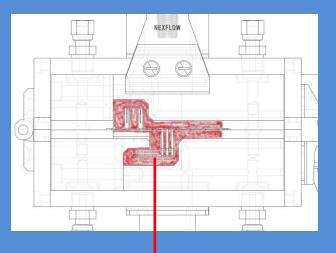


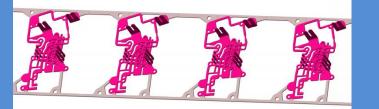
### DRY STEAM PROCESS FOR THE CONTINUOUS CLEANING OF STRIPES REA CLEANING SYSTEM ALLOWS TO TREAT VARIOUS SIZES AND SHAPES OF STRIPES

400	cadence de découpe	500	cadence de découpe	300
16,5	pas outil	12	pas outil	16,5
6,6	Défilement en mètre/minute	6	Défilement en mètre/minute	4,95
16 mm	largeur bande après découpe	16 mm	largeur bande après découpe	12 mm
2 mm	largeur des 2 bandes de rive	2 mm	largeur de la bande de rive	2,8 mm
0,15	épaisseur bande après découpe	0,15	épaisseur bande après découpe	0,15
	16,5 <b>6,6</b> 16 mm 2 mm	16,5 pas outil   6,6 Défilement en mètre/minute   16 mm largeur bande après découpe   2 mm largeur des 2 bandes de rive	16,5 pas outil 12   6,6 Défilement en mètre/minute 6   16 mm largeur bande après découpe 16 mm   2 mm largeur des 2 bandes de rive 2 mm	16,5     pas outil     12     pas outil       6,6     Défilement en mètre/minute     6     Défilement en mètre/minute       16 mm     largeur bande après découpe     16 mm     largeur bande après découpe       2 mm     largeur des 2 bandes de rive     2 mm     largeur de la bande de rive









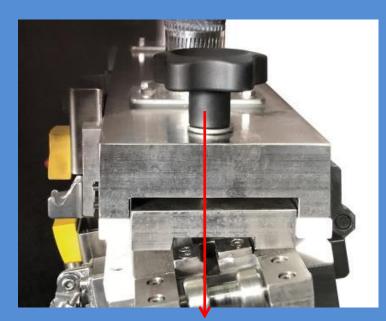




Steam nozzles are directed towards the most critical areas



#### Interchageable, tool free chambers



Change the chamber in less than 5 mn for cleaning different stripes

#### Very light, space saving cleaning tool



Only 1 person for moving the tool from a line to another



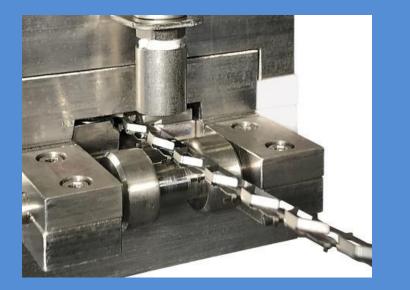
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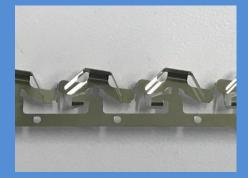


Exemple of cleaning tool : very short and mobile , danger free process



#### DRY STEAM PROCESS FOR THE CONTINUOUS CLEANING OF STRIPES



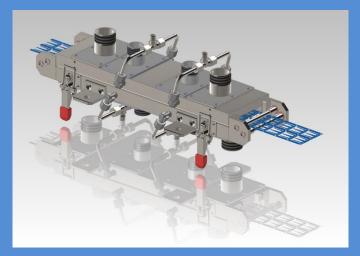


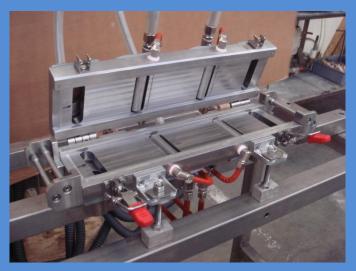


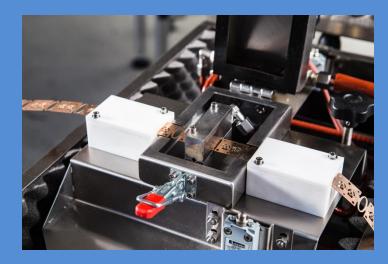
#### EXEMPLE OF ELECTRIC CONTACT CLEANED JUST AFTER THE PUNCHING PRESS



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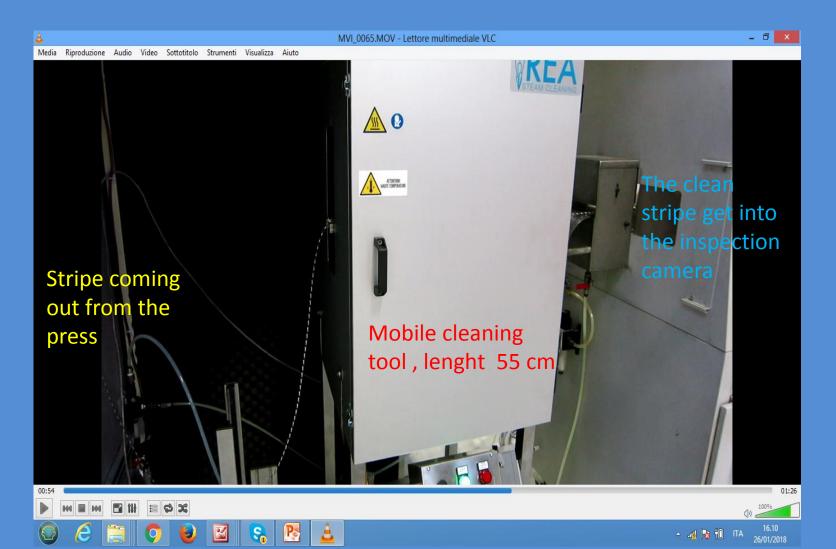








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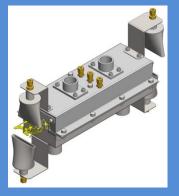


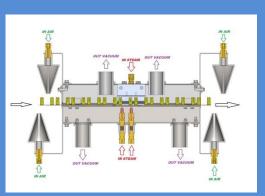
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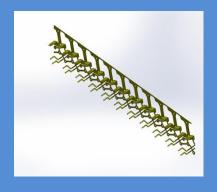
Tailor made solutions for your stripes, The REA method :

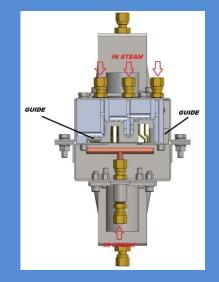
- 1- analyze of customer requirements
- 3d dr
- Speed
- Type of pullutants
- Required cleaning result (superficial tension)

2- cleaning test in REA or at customer -3- manufacturing and installation











<b>RFA</b>	82.	RAPPORT D'ESSAI			
STEAM CLEANING	CLIENT:	0000000000	200000000		
escription	13	lavage leadframe pliée 70mm x 17 mm			
generateur	SPECIAL 18 KW				
aspirateur	non				
detergent	non				
huile	huile evanescent client vaporisé sur bande avant lavage				
outil	lance multi trous 70 mm				
air comprime	si = pour enlever excédent d'huile et pour sécher				
temps d'essai	vitesse 10 m mn				
no d'echatillons	1				
indice lavage		de 34 à 36 selon zones ( sur face plié	ie)		
- pulverisation hulle EV 1038	2- soufflage air nour en	niever 3-2 passages vapour	4-soufflage air		
- pulverisation hulle EV 1038	2- soufflage air pour en Pexcédent d'huile	nlover 3-2 passages vapeur	4- soufflage air		
- pulverisation hulle EV 1038		nlover 3-2 passages vapeur	4- soufflage air		
			4- soufflage air		
e niveau de tension superficie	Fexcédent d'huile	utes les surfaces	4- soufflage air		
e niveau de tension superficie	Fexcédent d'huile	utes les surfaces	4- soufflage air		
niveau de tension superficie	Fexcédent d'huile	utes les surfaces	4- soufflage air		

#### **REA METHOD : :**

For each stripe, a test is performed , a test report is delivered for customer validation and acceptance of :

- Final cleaning result (superficial tension
- Dry surface, mark free surface
- Required amount of steam
- Required suction power
- Running costs (energy/water/ waste water treatment cost
- Installation layout
- Precise, detailed, surprise free price and timing quotation
- Garanteed result



#### VIDEOS =

www.youtube.com/watch?v=vwcSPQQx8uE

www.youtube.com/watch?v=1sX52HjwWxU