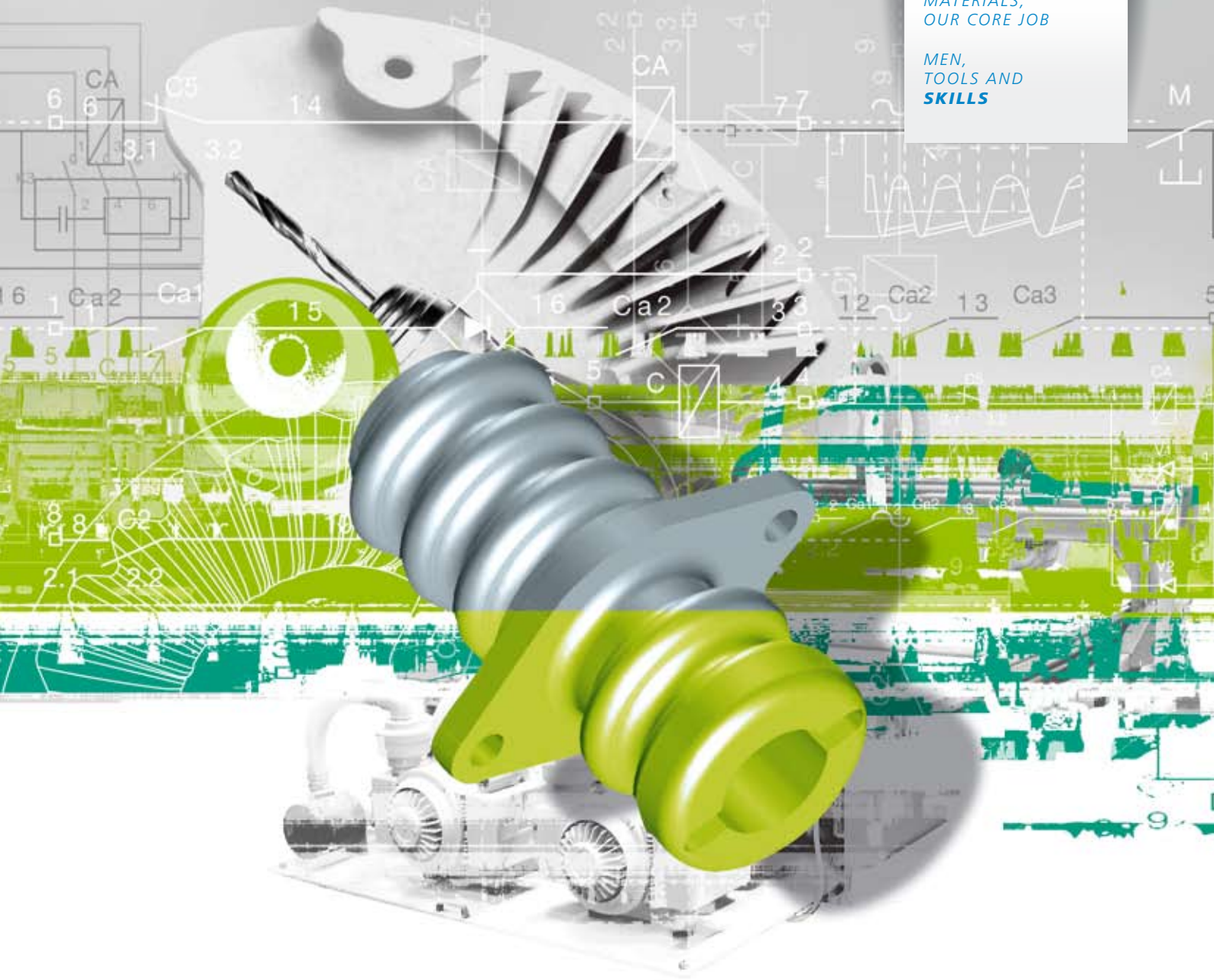


COLOMIX® 71,
THE ASBESTOS-FREE
REVOLUTION

MACHINING
COMPOSITE
MATERIALS,
OUR CORE JOB

MEN,
TOOLS AND
SKILLS



LENOIR ELEC

INSULATORS

■ **Approved by the French national railways**

Always at the cutting edge of innovation, Lenoir Elec has developed a substitute to cement-asbestos for electrical engineering field:

COLOMIX 71 S, a cement-glass composite officially recognised by railway companies (SNCF in France, SNCB in Belgium) and the French national power utility.



■ **Modern choices**

Colomix is an asbestos-free thermoelectric insulating material, which can be compared to the cement-glass composite family. It makes machining better (milling, pumicing, sawing, turning, etc.) and offers physical properties in connection with use conditions (high temperatures, mechanical constraints, etc.) physical properties to match conditions of use.

More particularly it is well suited for manufacturing blowout cages used in circuit-breakers and bar-contactors and has outperformed original asbestos-made products (reduced breaking time).

Hygienic and safety imperatives were taken into account in elaborating this new product since it is a substitute to asbestos-made materials and conforms to regulations.

OHS authorities have recognised that COLOMIX presents no hazards for human beings. Ceramic fibers are not used in our product manufacturing.



5000 A contactor equipped with Colomix 71S blowout cages

■ **COLOMIX® 71: characteristics**

Properties	Value	Unit
Mechanical characteristics		
Flexural strengths		
23°C - 200°C	24	MPa
400°C - 600°C	15	MPa
Compressive strengths		
23°C - 200°C	118	MPa
400°C - 600°C	78	MPa
Physical characteristics		
Density	1,92	g / cm ³
Water absorption ⁽¹⁾	0,25	%
Linear dilatation coefficient	7,2.10-6	K-1
Thermal condition	0,75	W / m-1 / K-1
Electric characteristics		
Dielectric rigidity //	. 0,7 ⁽²⁾	kV / mm-1
Dielectric rigidity	2,5	kV / mm-1
Electric arc resistance	300	seconds

⁽¹⁾ with silicone impregnation, ⁽²⁾ breakdown in the air.

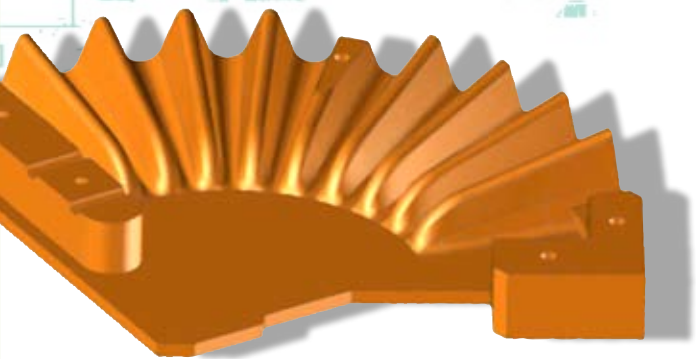
■ Highly skilled staff

Thanks to long years of experience in specific manufacturing and machining thermal and electric insulating material (cement-glass, calcium silicates, thermosettings, etc.), Lenoir Elec's Insulator department can offer you the best and the most competitive solution for your projects.

■ A quality service

ISO 9001 certified for more than 10 years, quality and service to customers are our first priorities.

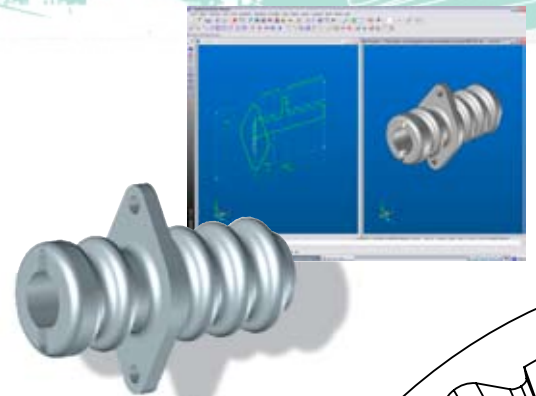
Among our clients, SNCF, RATP, Schneider Electric, General Electric are prestigious but very demanding customers. This is the best proof of the quality of our service and of our know-how.



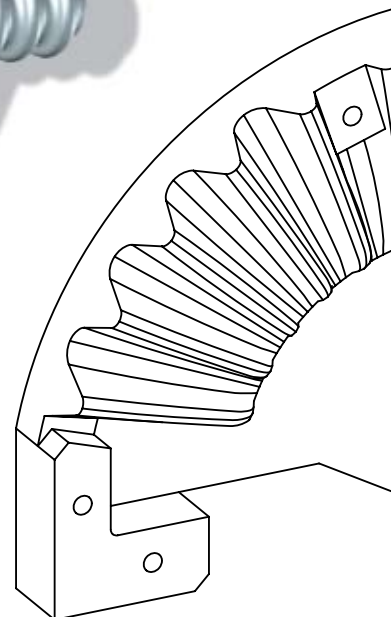
Element from blowout cage designed out of a pattern

■ Competitive means

- 3D CAD station
- CFAO station
- CNC 5 axis machining center
- CNC 3 axis machining center
- CNC 3 axis milling machine
- CNC production lathes
- CNC sanders (capacity in width 1000 mm)
- 2000 ton press.



Glass/ Epoxy insulating bushing according to SNCF drawing



2000 ton press manufacturing
COLOMIX 71.



■ **Research and development centre**

Lenoir has its own R&D department. Thus Lenoir Elec designs and realises custom-made solutions for specific lines of business such as glassworks, metalworks, cryogenics, petrochemical, railway and electrical engineering industries.

VISIT US ON:

www.lenoir-elec.com



■ **Progress and innovation**

Last-born development from Lenoir Elec, a cement-glass composite with a low friction factor is meant to be used in glass work industry to replace products made of cement-asbestos.

Thanks to its intrinsic characteristics, it does not scratch the glass and can withstand the thermal and mechanical constraints, specific to this particular field of activity.



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