

ThyssenKrupp Electrical Steel Presentation MEDEE

09 July 2015



Developing the future.



ThyssenKrupp

ThyssenKrupp Electrical Steel

3 plant locations & 1 R&D team

Gelsenkirchen -D-



Nashik -I-



Isbergues -F-



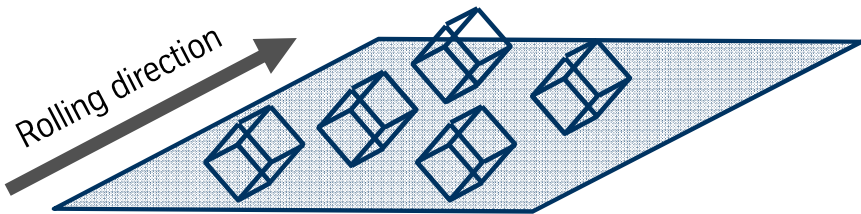
<http://www.tkes.com>



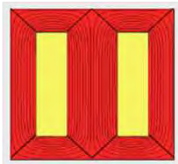
Distinction between GO and NGO

Differences in grain size and texture → Difference in Applications

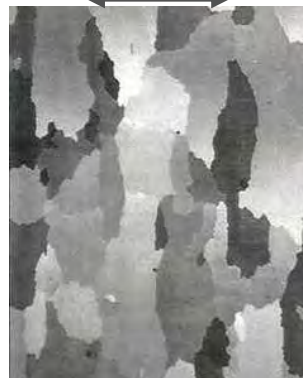
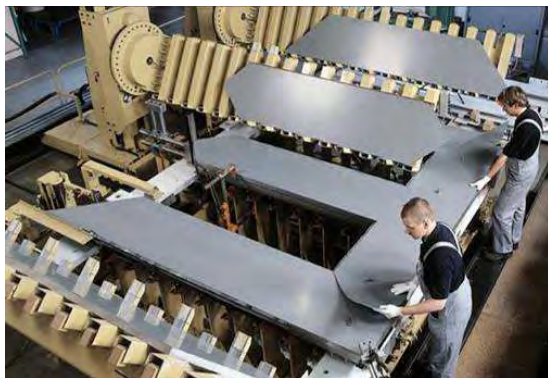
Grain Oriented Electrical Steel



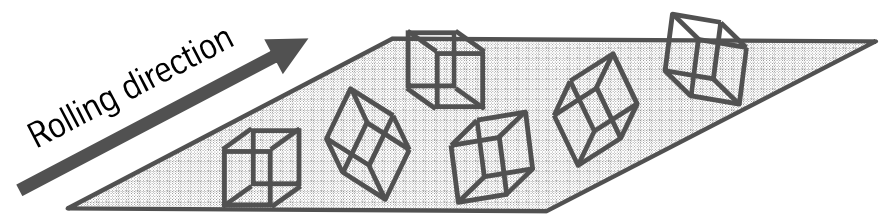
- ▶ Anisotropic properties
 - especially for transformers



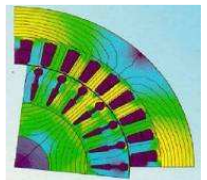
30.0 mm



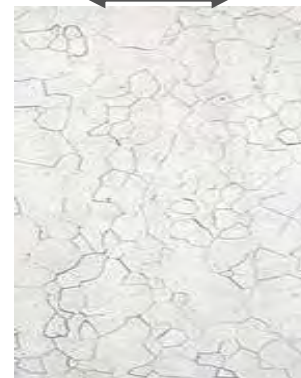
Non Grain Oriented Electrical Steel



- ▶ Isotropic properties
 - especially for motors and generators







0.3 mm



End-Use of Electrical Steel Products

Products and Markets

| | | | | | |
|---------------------------------|---|---|--|---|---|
| Grain oriented electrical steel | Power transformers | Distribution transformers | Wound core transformers | Power generators | Rectifiers |
| |  |  |  |  |  |

| | | | | | |
|-------------------------------------|--|--|---|--|--|
| Non grain oriented electrical steel | Motors, drives | Hydro, turbo, wind power generators | Fans, ballasts | Pump motors | Alternators |
| |  |  |  |  |  |

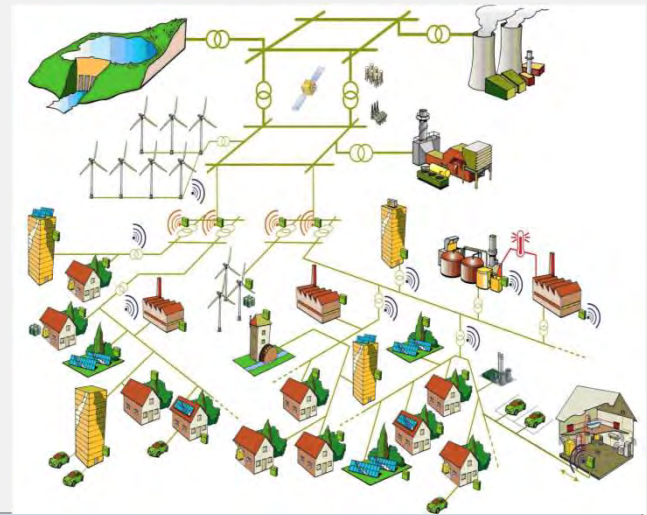


L'Acier Electrique est au cœur des entrainements électriques
 → nous recherchons des partenaires de R&D et d'innovation

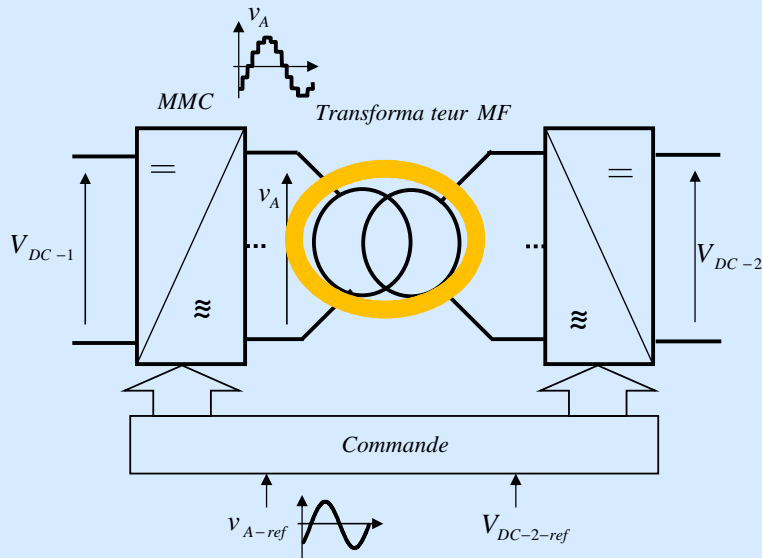
Go4DC

S'ADAPTER AUX ÉVOLUTIONS DES RÉSEAUX ÉLECTRIQUES CC

- Transformateurs moyenne fréquence
- Moyenne puissance
- Acier à Grains Orientés

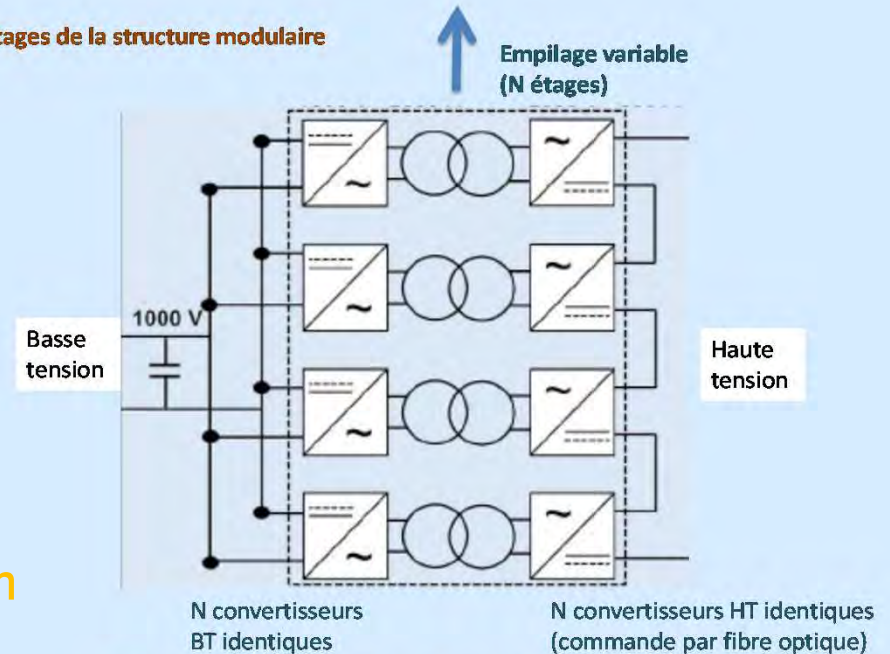


P
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Brique élémentaire intervenant de façon étagée dans la chaîne de conversion

Avantages de la structure modulaire



K phases → KN transformateurs monophasés avec une isolation de plus en plus renforcée en fonction de sa hauteur dans la pile

Merci pour votre attention

