Establishing and Managing an Austrian Industrial Enterprise in Russia

Annual Conference of the Association for the Transfer of Technologies, Innovation and Industrial Information

May 28th, Nizhny Novgorod Trade Fair, Academic Hall

by Gulya Rakhmatova, Plant Manager, OOO Collini NNovgorod
...We Know How
_ Leading in Galvanik & Metal Coating in Europe
_ 110 Years Innovation & Experience
_ Headquarter in Austria
14 Metal-Coating Plants in Europe
100 Engineers & Materials Scientists
300 Surface Engineers
160 MM Euro Sales - 2010
1500 Employees
Steering „Tedrive“ – Integral Housing
Train pipe

Mercedes-Benz
Collini Innovation: Unique Automated Rack Line
Continuous Motion Line. 4 - Metal Layer System
60 Million Parts per Year Rasor Handles Zink Cast
1.10.2008 Nizhny Novgorod, GAZ Area: SOP
First Galvanic Plant „State of the Art“ – in Russia

- 320 Employees
- 50 Surface Engineers
- 22 Plating Lines
- Analytical Laboratory
- R&D Laboratory
Why Collini established Galvanik in Russia? And why starting in Nizhniy Novgorod?
Carlos Ghosn, Renault Nissan chief executive touring Renault’s Moscow plant on Monday, March 1\textsuperscript{st} 2010

“The only issue that concerns us is suppliers," Ghosn said.
„The noble Link in your Component Supply Chain“. We know how…
Power Drive Systems
Collini Skintech®TNZ
Multifunctional Composite Layer

1. Corrosion resistance
   720 hours

2. Fretting resistance of tooth wheel
Gorki (Nizhny Novgorod?) already 80 years ago
„Goes International“
The US Carmaker „Ford“ cooperated with „GAZ“ starting in 1932

The famous US Architect Albert Khan gave the GAZ Area „Innovative Architecture“

A concept of „Fabric-Buildings“ which even till our days impresses International Architects
Technology Strategies
Innovation, Performance & Productivity Competitiveness

Collini focus new Surface Technologies, Product & Market development

GAZ focus on Core Business Automotive Engineering & Marketing
Establish Galvanic „State of the Art“ for Subcontracting“

Former Domestic Technologies
End of Life-Cycle
Corporate Structure: „Kombinat“
What Collini found – when we came here
Traditional Technology in Metal Threatment.
Plating Lines working since 1936 without further investments
Gazelle & Volga Parts
polished & decorative Chrom plated
And many Employees – ready to change
320 Employees
- 50 Surface Engineers
- 22 Plating Lines
- Analytical Laboratory
- R&D Laboratory
Zink Layer Barrel Line
10.000 Tons/Year
Change Management
– ready to change
320 Employees
➢ 50 Surface Engineers
Best available Technique: Now in Russia
Zink Layer Barrel Line: 10,000 Tons/Year
Business Process to International Standards
SAP, Environmental- and Safety Management
Added value for all stakeholders

- Integrated Management Systems
  - Quality System
  - Environmental Protection
  - Business Processes implemented with SAP

- Highest Productivity
  - Automation and Rationalization
  - Continuous Improvement

- HR Policy
  - Fostering Self-responsibility
  - Knowledge and Experience through targeted training
  - Interdisciplinary Teams
Best Available Technique
Analytical Laboratory; R&D Laboratory
Top Product Quality
Corrosion Protection – International Standard
Alkaline Zinc Systems – the Collinox series
Corrosion Protection – International Standard
The „Green“ Alternative. the Collinox series
Bright & Decorative & more
... and more Coatings

<table>
<thead>
<tr>
<th>Type of coating</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphating</td>
<td></td>
</tr>
<tr>
<td>Chemical oxidising of Al</td>
<td>For further painting</td>
</tr>
<tr>
<td>Steel oxidising</td>
<td>hot oxidizing, black coating</td>
</tr>
<tr>
<td>Hard Chromium</td>
<td>9-18 µm</td>
</tr>
<tr>
<td>Nickel</td>
<td>Cu 3-5 µm, bright Ni 18 µm</td>
</tr>
<tr>
<td>Copper-Nickel-Chromium</td>
<td></td>
</tr>
<tr>
<td>Nickel-Chromium</td>
<td>Cu (cyanide) 3-5 µm, bright Ni 18 µm, Bright Cr 0,5 µm</td>
</tr>
<tr>
<td>Copper</td>
<td>Cu acidic 30 µm - spark protection</td>
</tr>
<tr>
<td>Anodising</td>
<td>corrosion protection</td>
</tr>
<tr>
<td>Black Oxidising</td>
<td></td>
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Management Systems

Quality Management

Collini
OOO Collini - 2012

ISO 9001-2000
additionally TS 16949 (automotive)

Environmental Management Systems

Collini

ISO 14001
Quality International Standard. We know how ... to use the tools and deal with the requirements of TS 16949

<table>
<thead>
<tr>
<th>Concept and Quotation</th>
<th>Development and Planing</th>
<th>Design and Prototype</th>
<th>Production Preparation</th>
<th>Preseries Production</th>
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</thead>
<tbody>
<tr>
<td>Customer Quotation</td>
<td>Concept Freeze</td>
<td>Design Freeze</td>
<td>API</td>
<td>SOP</td>
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</tbody>
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Supplier APQP and Tracking

<table>
<thead>
<tr>
<th>APQP-1</th>
<th>APQP-2</th>
<th>APQP-3</th>
<th>APQP-4</th>
<th>APQP-5</th>
</tr>
</thead>
</table>

**APQP-1 Initial APQP Kickoff**
- Initial time schedule of the supplier
- Process Flowchart
- Control Plan
- Design Evaluation of components
- Advanced Product Quality Planning
- Capacity Planning
- List of measures for project
- Joint development agreement
- RASIC: Responsible, Approve, Support, Inform, Consult

**APQP-2 Design Review**
- Design Review of components
- Review of Supplier Plan
- Advanced Product Quality Planning
- Review of Process Flowchart
- Review of Control Plan
- Review of Product Properties
- Review of Supplier Plan

**APQP-3 Process Des. Review**
- Update of Component Design
- Review of Supplier Plan
- Advanced Product Quality Planning
- Product FMEA (Failure Mode and Effect Analysis)
- Review of Equipment and Gauges
- Update of Measurement Plan
- Capacity Study
- Supplier Chain
- Matrix of attributes

**APQP-4 Pre-PPAP**
- Advanced Product Quality Planning
- Pre-Production Part Approval Process
- Review of suppliers’ schedule
- Advanced Product Quality Planning
- Product FMEA (Failure Mode and Effect Analysis)
- Development of assured implementation plan

**APQP-5**
- Review of risk analysis during implementation process
- Product & process audit
- Production Part Approval Process
- Retraceability of charges
- Run at Rate / verification of capacity studies
- Verification of open measurements
- Implementation of “Safe Launch Plan”
Our customers current partners in West-Europe
Our Potential Customer in Russia
Automotive Plating Standards

TL 217 Zinküberzüge
Oberflächenschutzanforderungen

NORME VEHICULES B15 4101
ELECTROLYTIC ZINC DEPOSITS
AND ASSOCIATED FINISHES

ENGINEERING STANDARD
TSH6524G
ELECTROPLATED ZINC COATING
(HEXAVALENT CHROME FREE)

Standard N°: 5J0105
ELECTROLYTIC ZINC PLATING +
REINFORCED PASSIVATING

Design Requirement E108192
Corrosion Preventive Coating on Zinc alloy
Forgings
Presses with power of up to 4000
Presses with power of 6300 ton-force
Stamping lines for large parts with power of 12500 ton-force (crankshafts, beams
Hot-forging automatic machines
Automatic lines for manufacture of flat parts of connecting rod type

Castings from non-ferrous alloys
OOO Flaig+Hommel
Zheleznodorozhnaya
Nizhny Novgorod
Supply Chain Success Story
Russian Steel, Russian Manufacturing
Russian Plating

Zink-Layer Rack-Line
12,000 Ton/Year

Roto DE
Top-Level Management visits Collini at Nizhniy Novgorod plant
Best available – International Standards
ProductsNow in Russia
Our Mindset is „24 Hours“-thinking

Russia is Great. The distances are good. Galvanic-Investment is huge Money. Volumes are still small. Customer needs On-Schedule Reliability. Collini is powerfull enough for this Challenge.
Collini Growth in Russia

2008 Nizhniy Novgorod Plant – SOP October 2008

2015 “x” more Collini Plants. What, where & when … it’s market demand

*prospective locations*
Collini Vision: First - Nizhny Novgorod; Than – all Russia

Area (Покрытие площади)

Galvanic (x) = Collini
The changing rules of the game of business

<table>
<thead>
<tr>
<th></th>
<th>given</th>
<th>to play</th>
<th>to win</th>
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</thead>
<tbody>
<tr>
<td>70´s</td>
<td>Right Product</td>
<td>Right Cost</td>
<td>Quality</td>
</tr>
<tr>
<td>80´s</td>
<td>Right Cost (Value)</td>
<td>Quality</td>
<td>Time</td>
</tr>
<tr>
<td>90´s</td>
<td>Right Cost (Value)</td>
<td>Time</td>
<td>Total Customer Service</td>
</tr>
<tr>
<td>2000</td>
<td>Right Cost (Value)</td>
<td>Total Customer Service</td>
<td>Innovation</td>
</tr>
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