GREENoneTEC – BUSINESS UNITS

GREENoneTEC

OEM
- Customized collectors
- Collector exchange
- Innovation

SYSTEMS
- SUNPAD
- SOLCRAFTE
- Thermosiphon CLASSIC

PROJECT
- District heating
- Industrial Processes
- Residential buildings
• Production volume 2022: 560,000 m²
• Export quote > 85%
• Sales > 100 countries
• Production capacity: 1.6 Mio. m² (3-shift)
• Fully automated production facilities on 28,000 m² with robot systems
• Laser welding (3 machines)
• Automatic meander bending machine
• Automatic brazing centers
PRODUCT & SYSTEM CERTIFICATES

- Solar Keymark
- Austria Solar Gütesiegel (AT)
- Österreichisches Umweltzeichen (AT)
- CSTBat (FR)
- MCS (UK)
- SRCC (USA)
- ICC-ES PMG Listing Mark (USA)
- DCL – Dubai Zertifikat
- Global-Mark Zertifikat
Costs for certification, inspection

- **Number of collector certificates GoT**: more than 60 certificates
- **Time spent internally for physical inspection**:
  - Preparation: 2 days for one person → 850 Euro
  - Inspection: 2 days/2 person plus 10 hours of colleagues, which are involved in the inspection process like purchasing, complaint management, quality management, production..... → 2.200 Euro
- **Travel costs Inspector**: approximate 800 Euro/inspection
- **Costs of initial or repeat inspection**:
  - approximate 10.000 Euro for the performance and quality testing
  - plus costs for the necessary production of collectors, approx. 2.000 Euro
Possible savings if GSCN are in full operation

Assumption based on GoT with 6 different certificates (Solar Keymark, SRCC, CSTBat, MCS, DCL, Global Mark) and only one necessary initial test.

<table>
<thead>
<tr>
<th></th>
<th>now</th>
<th>possible future</th>
<th>possible savings – best case</th>
</tr>
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<tbody>
<tr>
<td>Initial testing</td>
<td>Production of collectors</td>
<td>12.000 Euro x 6</td>
<td>15.000 Euro</td>
</tr>
<tr>
<td></td>
<td>and necessary testing,</td>
<td>72.000 Euro</td>
<td></td>
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<td></td>
<td>transport.....</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel cost inspection</td>
<td>800 Euro x 6</td>
<td>800 Euro</td>
<td>4.000 Euro</td>
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<td>and collector - selection</td>
<td>4.800 Euro</td>
<td></td>
<td></td>
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<tr>
<td>Internal preparation</td>
<td>425 Euro x 6</td>
<td>1.000 Euro</td>
<td>1.550 Euro</td>
</tr>
<tr>
<td>(one day)</td>
<td>2.550 Euro</td>
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<td>periodic inspection</td>
<td>Internal preparation (one day) 425 Euro x 6 2.550 Euro</td>
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<td></td>
<td>Travel cost inspection for collector - selection 800 Euro x 6 4.800 Euro</td>
<td>2.000 Euro</td>
<td>2.800 Euro</td>
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<tr>
<td></td>
<td>Inspection (time of colleagues) 425 Euro x 2p x 2d x 6 10.200 Euro</td>
<td>3.500 Euro</td>
<td>6.700 Euro</td>
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<tr>
<td>Total:</td>
<td>17.550 Euro</td>
<td>6.500 Euro</td>
<td><strong>11.050 Euro</strong></td>
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Conclusion:

- We have a preliminary theoretical savings potential of approx. **10,000 euros per certification scheme** for each new collector type/family if we can manage that one common initial test would be enough for several certificate schemes.

- In case of periodic inspection, savings of approx. **2,000 euros per certification scheme** are possible, if one inspector is authorized to check the different requirements of the certification bodies.

- SRCC is the best example how it could work. The cooperation works well from the point of view of the manufacturer.

- We need more such cooperation like SRCC!!

- It takes really a lot of time to find the right contact person and the willingness of all involves parties to change existing certification rules

- One initial testing at the beginning would be great. Maybe it could work like we do with the patents. First do a complete testing and afterwards take the decision, which certificate schemes are needed.

- **GSCN NEED MORE INDUSTRY PARTNERS!! YOU ARE WELCOME!!**
Thank's for your attention!!