Potential Projects for JCM Model Project in Chile

Contribution to CSP projects

AGC Inc.



Your Dreams, Our Challenge

AGC

Business of AGC group



Glass

Net sales: **757.5** billion yen Operating profit: **22.5** billion yen

Architectural glass ······ Net sales: 358.9 billion yen
Automotive glass ······ Net sales: 397.3 billion yen



Chemicals

Net sales: **484.4** billion yen Operating profit: **71.1** billion yen

Chlor-alkali and urethane -----Net sales: 316.6 billion yen Fluorochemicals and specialty chemicals ------Net sales: 120.5 billion yen Life Science -------Net sales: 44.9 billion yen





Electronics

Net sales: **252.6** billion yen Operating profit: **24.0** billion yen

Display ····· Net sales: 183.4 billion yer	1
Electronic materials Net sales: 66.9 billion yer	ı



Ceramics/Other

Net sales: **79.0** billion yen Operating profit: **2.8** billion yen



*Sub-segment net sales utilize net sales to external customers. *Because sales and profit by segment are calculated before elimination, their totals will not match sales and profit for the company as a whole.

Global expansion of AGC group





Experiences of JCM in AGC



- Ion Exchange Membrane Electrolyzer (Mexico, Thailand)
- Electorolyzer in Chlorine Production Chemical Plant (Saudi Arabia)
- Solar PV at International School (Cambodia)





Furthermore, many projects including Feasibility Study have been conducted with Japanese Government.

What is CSP?



- Concentrated solar power (CSP) systems generate electricity by using mirrors or lenses to concentrate a large area of sunlight, or solar thermal energy, onto a small area.
- There are two major current innovation both HTA(Heat Transfer Air) and TES(Thermal Energy Storage) to promote CSP again.



https://en.wikipedia.org/wiki/Concentrated_solar_power https://solarpaces.nrel.gov/by-technology/power-tower

- Renewable energy
- Effective independent power source in the case of natural disaster
- Flat generation profile compared with PV
- Not only electricity but also heat can be generated.
- Japan can contribute as a global leader of glass



CSP can contribute to realize **SDGs**!



All types of CSP need Glass products.



AGC products for CSP as a Global leader





Investment costs



In case of 50 MW trough plant with 7-hour storage



http://www.solarpaces.org/wp-content/uploads/csp_roadmap.pdf

Innovation for CSP



HTA and TES

Solar Power, Day and Night.



<new technology>

Solar Reserve Crescent Dune Nevada plant

https://solarreserve.com/en/global-projects/csp/crescent-dunes.html https://d3n8a8pro7vhmx.cloudfront.net/sen/pages/32/attachments/original/147 0965471/SEN_CST_Presentation__2016_-_Daniel_Thompson.pdf?1470965471

Potential projects after Atacama 1



Market potential of CSP



All most 2/3 potential is located in Chile.





- Innovation for CSP Mirror (Flat and Thin oriented technology)
- Top runner of transparency and durability
- High quality by various experiences from early days of CSP
- Various line up such as CSP glass, Mirror and Tube
- On time global supply chain

Examples of other potential



The AGC Group's Major Energy-Saving and Energy-Creating Products





 Our colleagues will visit Santiago in the week of 2nd, September as expert dispatch program supported by JETRO.

• AGC plans to make a presentation innovative glass technology for CSP in Japan pavilion at COP 25.

AGC Inc.

Shin-Marunouchi Bldg., 1-5-1 Marunouchi

Chiyoda-ku, Tokyo 100-8405 Japan

Inquiries:SDGs Division, Corporate Planning General DivisionMail Address:masaaki-okabe@agc.comTel:+81-80-2110-1391Fax:+81-3-3218-7800

www.agc.com



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