Current Situation of Titanium Industry in Japan

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Today’s Topic

1. Titanium Shipments in Japan
2. Titanium Shortage
3. Application Development and Cost Reduction
4. JTS’s Activities
5. Conclusion
1. Titanium Shipments in Japan

Mill Product Shipments in Japan

MT

20,000

15,000

10,000

5,000

0

'96 '97 '98 '99 '00 '01 '02 '03 '04 '05

Export
Domestic

JTS
1. Titanium Shipments in Japan

Titanium Sponge Shipments in Japan

MT
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0

'96 '97 '98 '99 '00 '01 '02 '03 '04 '05

Export
Domestic

Titanium Shipments in Japan

JTS
2. Titanium Shortage

Shipment Comparison b/w FY2004 and FY2005 in Japan

- Mill Product Shipments
- Titanium Sponge Shipments
2. Titanium Shortage

Import and Export of Unwrought Titanium in Japan

- Import
- Export

MT: Metric Tons
2. Titanium Shortage

Material Switch

Example

Super Stainless

Welded Tube

Cupronickel

Welded Tube

Stainless

Sheet
2. Titanium Shortage

Solution to Titanium Shortage

- Titanium Sponge Production Capacity Expansion
- Titanium Ingot Production Capacity Expansion
- Utilization of Titanium Scrap
3. Application Development and Cost Reduction

Shipments by Use in Japan

Y1993: 7,646M T

Y2005: 18,147M T

- Chemical Plant
- Power Plant
- Desalination
- Soda-Electrolysis
- PHE
- Aerospace
- Automobiles
- Ships/Marines
- Energy
- Architect/Construction
- Sport Leisure
- Consumer Goods
- Medical
- Distributor
- Others
3. Application Development and Cost Reduction

Increased Use in terms of %

**Data Points:**
- **Soda-Electrolysis**
- **PHE**
- **Aerospace**
- **Automotives**
- **Ships/Marines**
- **Sport Leisure**
- **Consumer Goods**
- **Medical**
- **Distributor**
- **Others**

**Graph Details:**
- Y-axis: Increased Use in terms of % from 0% to 18%
- X-axis: Years from Y1993 to Y2005
3. Application Development and Cost Reduction

Decreased Use in terms of %

- Chemical Plant
- Power Plant
- Desalination
- Energy
- Architect/Construction

3. Application Development and Cost Reduction

Number of Associate Members in JTS
3. Application Development and Cost Reduction

Sputtering Target for VLSI
3. Application Development and Cost Reduction

PHE
3. Application Development and Cost Reduction

Golf Club

Muffler

Photo
3. Application Development and Cost Reduction

Architecture
3. Application Development and Cost Reduction

Case
3. Application Development and Cost Reduction

Imaginary of OTEC Plant
3. Application Development and Cost Reduction

Titanium Separator for Polymer Electrolyte Fuel Cells
3. Application Development and Cost Reduction

Cost Reduction Effort

• Improving Kroll Process

Example: Energy Consumption

- Electricity
- Heavy Oil

• New Production Process
4. JTS’s Activities

Instruction in Titanium for High School Teachers
4. JTS’s Activities

Seminars

Engineers

Marketing people
4. JTS’s Activities

Unification of Specification
4. JTS’s Activities

Consultants and Advisers

- Retirees with titanium Experiences
- Application development
- Institutionalized
- 14 consultants and 14 Advisers
5. Conclusion

- Demand increase in the long run.
- Supply shortage temporarily.
- New entrants.
- Competition with alternative materials.
- Improving existing process and developing new technology.
- Enhancing the status of Titanium.
5. Conclusion

Import Duty

- Japan
- EU
- USA

Categories:
- Wrought
- Unwrought
5. Conclusion

11th World Conference on Titanium

Kyoto
Thank You