Accelerating Distinctiveness
—Seamless Pipe

- Invest in more cutting-edge products -

April 2006
Seamless Pipe

Energy Sector

Current position

Dominant position

No. 1 brand in the field

Accelerating distinctiveness

Focus on high-grade products
Reinforce SCM with major oil companies

Respond to increased customer demand for high-grade OCTG

→ Invest in more cutting-edge products
1. Seamless Pipe Business

(1) Global Energy Trends 4-6
(2) Changes in Supply/Demand Structure 7-10
(3) Sumitomo Metals’ Strengths 11-15
Outlook for Energy Demand

Source: IEA World Energy Outlook 2005
IEA = International Energy Administration

Million TOE/ year

- Oil
- Natural gas
- Coal
- Nuclear Power
- Others

1,400 Million TOE/ year
Crude Oil Prices Since 1970s Oil Shocks (Average Annual WTI Price)

- Breakeven point for high-cost oil fields (small-scale offshore fields; Sumitomo Metals estimates)
- Average breakeven point for oil majors (Sumitomo Metals estimates)
- Breakeven point for low-cost oil fields (Middle East shallow oil wells; Sumitomo Metals estimates)

- 71.79 (As of April 19, 2006)

EIA oil price scenario ($30-35)
IEA oil price scenario ($35-39)

EIA = Energy Information Administration
IEA = International Energy Administration
Global Rig/Well Count and Projected OCTG Demand

Rig count: No. of working rigs
Well count: Wells drilled during the year

OCTG demand (right axis)  Well count (left axis)  Rig count (right axis)

Source: Sumitomo Metals estimates compiled from available statistics
Mergers and Acquisition in the Oil and Gas Industry

Number of Major oil companies: 11 10 9 6 5

1. Shell (Anglo-Dutch)
2. Exxon (US)
3. Mobil (US)
4. BP (UK)
5. Texaco (US)
6. Chevron (US)
7. Total (France)
8. Amoco (US)
9. Elf (France)
10. PetroFina (Belgium)
11. ARCO (US)

Relationship with Sumitomo Metals

Long-term contract
Comprehensive long-term contract
Ongoing business relationship

1997 1998 1999 2000 2001 Currently

Ranking

1. Shell (Anglo-Dutch)
2. Exxon (US)
3. Mobil (US)
4. BP (UK)
5. Texaco (US)
6. Chevron (US)
7. Total (France)
8. Amoco (US)
9. Elf (France)
10. PetroFina (Belgium)
11. ARCO (US)
Mergers and Acquisition in the Seamless Pipe Supplier

- Sumitomo Metals
- Nippon Steel
- Kawasaki Steel
- NKK
- Vallourec
- Mannesmann
- North Star
- Brazil Mannesmann
- British Steel
- Siderca
- Tamsa
- Dalmine
- Algoma

- Currently: Sumitomo Metals

Number of Major Supplier: 13 12 11 10 9 6 5 4

stopped operation of yahata works

Currently: JFE

Currently: Vallourec

Currently: Tenaris
Changes in Supply/Demand Structure for Seamless Pipe

(1) Changes in Demand Structure
- Rising energy needs in BRICs is supporting high demand for seamless pipe
- Demand-side mergers have created “super majors” that employ even longer timeframes for oil and gas field development

Higher and stable demand
Smaller fluctuation in demand

(2) Changes in Supply Structure
- Supply-side mergers have resulted in fewer manufacturers

Higher prices with smaller fluctuation
Smaller Price Fluctuation/Rising Base Prices

Index of Seamless pipe export price at Wakayama Custom. (6 Months Floating Average Jun, 1988=100)

WTI Spot Price FOB ($/Barrel)

Small Price Fluctuation

Comparison between peak and bottom over short timeframe

Rising base prices

Number of Major oil companies

11 10 9 6 5

Number of Major Supplier

13 12 11 10 9 6 5 4

Crude oil price range

Seamless pipe price range

3.3times 2.2times 1.6times
Sumitomo Metals’ Strengths: Working Closely with Customers

Track record as No1 seamless pipe supplier
High Quality
Manufacturing technology
Product Lineup
(From carbon steel to super high-alloy)
Technical Support
Delivery track record

Request for Technical Advice from Customers
Identify customer needs ahead of competitors

Working Closely with Customers
Meetings to share technical information
Joint R&D

Maintaining World-leading Technology Development Capabilities

Technical deliberations in the laboratory
Prototype testing
Production of the test sample for test in actual condition

Customer field tests
Customer technical evaluations
Large-scale oil and natural gas development projects

Rising number of OCTG and line pipe projects worldwide

Major Customers of OCTG and Linepipe

Subsea pipeline
Super 13 Cr

Arctic regions -40º

Deep wells
5,000～10,000m well depth

Deep sea
~2,000m water depth

Sour well
H₂S ~10atm

★ Deep sea
★ Deep well
★ Highly corrosive environment

Rising number of OCTG and line pipe projects worldwide
World’s top lineup of materials

Application of Sumitomo Metals Material

- Duplex stainless steel
- 13 Cr
- Super 13 Cr
- Ni alloy
- Carbon steel
- Low-alloy steel
- Alloy steel for sour service

<Changes in drilling environment>
- Natural gas development
- Sour condition
- Deep well

<Material selection for Natural gas development>
- Past: Use of corrosion inhibitor
  - Pollution & Higher cost
- Currently: 13 Cr stainless
  - +H2S
  - +Higher H2S
  - Duplex stainless steel
  - Ni Alloy

10^2
1
10^{-2}
10^{-4}
H2S partial pressure (atm)

Severe

Competitors’ lineup

Only Sumitomo Metals can fully cover customer requirements for extreme well conditions
**Sumitomo Metals’ Strengths: World-leading VAM Series premium joint**

### API Joints (Round Thread)
- *Leak*
- *Low Strength (Jump out)*
- *Erosion caused by turbulence*

### VAM Joints (T&C type)
- *Gas-tight*
- *High strength*
- *Internal flushness*

**Well depths**

<table>
<thead>
<tr>
<th></th>
<th>3.0 km</th>
<th>6.0 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom Hole Pressure</td>
<td>270 atm</td>
<td>540 atm</td>
</tr>
</tbody>
</table>

**Harsh environment**
(Deep wells, Horizontal wells etc.)

### VAM TOP

**NEW VAM**
- **Gas wells**
  - Offshore
  - Onshore
- **Oil wells**

**API**

### Ratio of VAM series high-grade joints
- 2005: 83% → 2008: 85%

### VAM TOP application
- **Deep wells**
  - High strength
- **Horizontal wells**
  - Strength against compression
- 13CR, Super High Alloy
Global Market Share of high-grade products

Share of super high-alloy OCTG sales
(Sumitomo Metals estimates for 2005)

- Sumitomo Metals: 80%
- Competitors: 20%

Share of 13Cr OCTG sales
(Sumitomo Metals estimates for 2005)

- Competitor A: 40%
- Competitor B: 14%
- Competitor C: 13%
- Sumitomo Metals: 33%

Sumitomo Metals has captured roughly 80% of the market for super high-alloy OCTG.
Top two companies have captured more than 70% of the market for 13Cr OCTG.
2. Seamless Pipe Business Strategy

(1) Key Strategy 17
(2) Meeting Demand for high-grade Products 18-19
(3) Overview of Investment in high-grade Products 20-21
(4) Further Enhancing the Sumitomo Metals Brand 22-23
Key Strategy

Extensive Product Lineup

Meeting surging demand of high-grade products

Further strengthening brand power

Increase capacity by 100,000 tons/year, targeting at high-grade products

Establish SCM system

Reinforce R&D

High Quality

Accelerate Distinctiveness in the Seamless Pipe Business
Increase Seamless Pipe Capacity by 100,000 tons/year

Supply shortage

Volume required by customers

Invest to increase production capacity
Expand Sales of high-grade OCTG

Invest to increase the capacity of high-grade products
## Overview of Investment in more Cutting-edge Products

### 1. Investment

<table>
<thead>
<tr>
<th>Target</th>
<th>Capacity increase</th>
<th>Implementation Period</th>
</tr>
</thead>
</table>
| **Pipe Rolling** | Invest to boost capacity utilization rate by faster change over  
|                | ➞ Establish 1.24 million tons of capacity                                           | Phased increases by first half of fiscal 2008 |
| **Heat-treatment** | Increase heat treatment capacity for small diameter pipe (2 lines ➞ 3 lines)  
| | Heat treatment capacity 490,000 tons ➞ 660,000 tons                            | During first half of fiscal 2008        |
| **Threading**   | Invest in threading facility to increase capacity (7 units ➞ 8 units)   
|                | Threading capacity 410,000 tons ➞ 550,000 tons                                   | Phased increases by first half of fiscal 2008 |
| **Super high-alloy** | Production capacity 14,000 tons ➞ 20,000 tons           | Second half of fiscal 2006             |
| **13CR**        | Production capacity 80,000 tons ➞ 100,000 tons                                    | Phased increases by end of fiscal 2006 |

### 2. Capex: 40 JPY billion
Steel Making Process
Iron ore is melted in the blast furnace to obtain a pig iron. Billet is casted after the chemical compositions are adjusted to the customers’ requirement.

Pipe Rolling Process
Billet is pierced to be a hollow shape and rolled to a designated size.

Finishing Process
Heat-treatment and threading is applied based on the requirement of the customers.

(Reference) Seamless Steel Pipe Manufacturing Process and Key Areas of Investment

<table>
<thead>
<tr>
<th>Super high-alloy</th>
<th>13Cr</th>
<th>Alloy steel for Sour Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Sumitomo Metals’ Steel Business

Sumitomo Metals is aiming to

Produce Technology

Provide Solutions

Conventional steel business

Before Service

Material sales

After Service

Before Service

Material sales

After Service

Before Service
Solid Partnership with Key Customers

Further enhance SCM and R&D

Long-term contracts with key customers
- Oil majors: ExxonMobil, BP, Shell and others
- State owned oil companies: Statoil, Aramco and others

Assign customer support specialists
Increase R&D personnel

Become the No.1 Solutions Provider for the Oil and Gas Industry