Creating the Future with Adhesive Technologies

Linkage + Technology

LINTEC

Sep. 7, 2017
Company information

■ Head Office: Itabashi-ku, Tokyo, Japan
■ Securities Code: 7966 (Tokyo Stock Exchange, 1st Section)
■ Established: October 15, 1934
■ Common Stock: 23.2 billion yen (as of March 31, 2017)
■ Number of Employees: 4,760 (as of March 31, 2017)
■ Net Sales: 206.0 billion yen (year ended March 31, 2017)
■ Fiscal Year-End: March 31
■ Business Activities: Development, manufacture, and marketing of adhesive products and related equipment, specialty papers, release papers and films, etc.
■ Consolidated Subsidiary: 3 companies (Japan) 38 companies (Overseas)
Company history

1934: Establishment of FUJI SHIKO CORPORATION, manufacturer of gummed tape (Itabashi, Tokyo)
*The name was changed to FSK CORPORATION in 1984

1960: Started production and sales of adhesive papers and films for labels
Subsequently expanded adhesive operations in industrial fields such as decorative materials for interiors and exteriors, motorcycle, automobile and others

1986: Developed UV curable dicing tape and made full-scale entry into the semiconductor-related product field

1987: MADICO, INC. , became a subsidiary

1990: Merged with SHIKOKU PAPER CO., LTD., and SOHKEN KAKO CO., LTD.
Name was changed to LINTEC Corporation
Expanded business activities from release papers and films, specialty papers to the fields of adhesive paper and films, related equipment

1991: Made full-scale entry into LCD-related product field
1994: PT. LINTEC INDONESIA was established

2000: LINTEC INDUSTRIES (MALAYSIA) SDN. BHD. was established

2002: LINTEC (SUZHOU) TECH CORPORATION was established

LINTEC SPECIALITY FILMS (KOREA), INC., was established

2003: LINTEC SPECIALITY FILMS (TAIWAN), INC., was established

2004: LINTEC KOREA, INC., was established

2011: LINTEC (THAILAND) CO., LTD., was established

2015: LINTEC ASIA PACIFIC REGIONAL HEADQUARTERS PRIVATE LIMITED was established

2016: MACTAC AMERICAS, LLC, became a subsidiary
Performance trends / Net sales, Operating income

Unit: Billion yen
- Net sales
- Operating income

Highest results on record

Global recession
The impact of financial crisis in Europe and the Great East Japan Earthquake, etc.
Overseas sales have increased 35.8 billion yen over the last 10 years with average annual growth of 6.4%.

- **FY2007/3**
  - Net sales: 192.7 billion yen
  - Overseas: 41.9 billion yen
  - Ratio of overseas sales to net sales: 21.8%

- **FY2017/3**
  - Net sales: 206.0 billion yen
  - Overseas: 77.8 billion yen
  - Ratio of overseas sales to net sales: 37.8%

Approx. 1.9 times
Basic composition of adhesive products

- Surface improvement
  - Printability, durability etc.
- Facestock
  - (Base paper / film)
- Adhesive
- Release paper / film

Meeting needs with in-house technologies
Four core technologies and operational segments

Core technologies

1. Adhesive applications
2. Surface improvement
3. System development
4. Specialty papers and Release materials production

Printing and Industrial Materials Products
- Printing & Variable Information Products Operations
- Industrial & Material Operations

Electronic and Optical Products
- Advanced Materials Operations
- Optical Products Operations

Paper and Converted Products
- Fine & Specialty Paper Products Operations
- Converted Products Operations

Adhesive materials + Equipment
Adhesive papers and films for labels

- Main types: Permanent, Removable, Restickable

55.1 billion yen
26.7%

FY2017/3
Net sales
206.0 billion yen
Usage of adhesive papers and films for labels / Required properties

- For commodity items
  - Water resistance
  - Curved-surface adhesion
  - Design

- For food products
  - Water resistance
  - Curved-surface adhesion
  - Cold resistance

- For stationery
  - Durability
  - Dimensional stability
  - Design etc.

- For distribution applications
  - Printability
  - Adequacy for affixing seals
  - Cold resistance

- For medical and pharmaceutical items
  - Printability
  - Chemical resistance
  - Tamper-evident

- For industrial applications
  - Oil- and water-resistance
  - Durability
  - Heat resistance
Industrial & Material Operations

- Window films
- Films for outdoor signs and advertising
- Interior finishing mounting sheets
- Automobile-use adhesive products
- Industrial-use adhesive tapes
- Labeling machines, etc.

FY2017/3
Net sales
206.0 billion yen

30.6 billion yen
14.9%
Automobile-use adhesive products

- Paint replacement films for door sashes
  - Original material design increases the passage of air and makes it simple to apply
  - With air bubbles
  - With no air bubbles

- Protective films for aluminum wheels

- Marking films

- Window films
Advanced Materials Operations

- Semiconductor-related adhesive tapes
- Semiconductor-related equipment
- Multilayer ceramic capacitor-related tapes, etc.

FY2017/3 Net sales 206.0 billion yen

43.0 billion yen 20.9%
Manufacturing process for semiconductor chip

【Fabrication】
- Single crystal silicon ingot → Wafer → Wafer following circuit formation

【Back-end process】
*Uses of our tapes and equipment
- Wafer following circuit formation
- Lamination of surface protective tape*
- Back grinding (wafer thinning)
- Lamination of dicing tape*
- Removal of surface protective tape*
- Dicing (wafer cutting)
- UV irradiation of tape*
- Picking up
- Mounting / Stacking
- Molding
Key tape products related to semiconductors

● Backside coating tape for Flip Chip
  - This tape protects and reinforces the die backside in applications such as Flip Chip, in which some bumps (electrodes) is formed on the circuit surface and mounted onto a substrate.
  - It blocks light to minimize effects on the circuit surface.
  - Unlike a coating of liquid mold material, this product is available as a tape, ensuring outstanding uniformity in thickness, and allowing the simplification of conventional processes.
  - We have broad lineups of the tapes including Infrared Transmission Type and Thermal Conductive Type.

● Surface protective tape for thin & high-bump wafers
  - This tape is specially designed to prevent thin wafers from bowing after back grinding.
  - It protects the surface of wafers from contamination by attaching to bumps formed on the circuit surface.
  - It prevents wafer damage by dispersing the stress placed upon wafers during back grinding.
**Multilayer ceramic capacitor (MLCC) – related tapes**

**Manufacturing process for MLCC**

1. **LINTEC’s release film**
2. **Dielectric paste (Slurry)**
3. **Ceramic sheet**
4. **Coating**
5. **Heat drying**
6. **Internal electrode printing**
7. **Die cutting and releasing**
8. **Stacking, compression bonding and cutting**
9. **Firing and external electrode forming**
10. **Forming several hundred layers in a 1mm square or less**

**Advanced Materials Operations**
**Electronic and Optical Products**
Optical Products Operations

- Polarizing films and retardation films for LCDs / Adhesive processing
- Polarizing films for LCDs / Surface improvement processing
- Protective films for polarizing films, etc.

FY2017/3
Net sales 206.0 billion yen

40.2 billion yen
19.5%
Structure of LCD

- Surface improvement
  - Anti-reflection / Anti-glare / Abrasion-resistance properties

- Polarizing film
- Adhesive
- Retardation film
- Adhesive
- Liquid crystal cell
- Adhesive
- Polarizing film
- Adhesive
- Light source

- Protective films for polarizing films
  - Dirt-resistance / Water-resistance / Anti-static

- Adhesive
- Substrate (film)
Fine & Specialty Paper Products Operations

- Color papers for envelopes
- Colored construction papers
- Special function papers (Dust-free papers and Oil resistant papers, etc.)
- High-grade printing papers
- High-grade papers for paper products, etc.

16.5 billion yen
8.0%

FY2017/3
Net sales
206.0 billion yen
Converted Products Operations

- Release papers for adhesive products
- Release films for optical-related products
- Release papers for FPC* cover lay films
- Casting papers for synthetic leather (release paper)
- Casting papers for carbon fiber composite materials (release paper), etc.

20.6 billion yen 10.0%

FY2017/3
Net sales
206.0 billion yen

*FPC: Flexible Printed Circuit
**Casting papers for carbon fiber composite materials**

- The casting paper is used as a base sheet for manufacturing "carbon fiber prepreg", which is a composite material composed of a sheeted form of carbon fiber fixed with resin.

- Carbon fiber prepreg has been used for goods for sports and leisure, such as tennis racket, golf shaft, and fishing rod, as well as for aircraft, and the demand has been expanding.

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**Manufacturing process for Casting papers for carbon fiber composite materials**

1. **Casting paper**
2. **Carbon fiber**
3. **Heating plate**
4. **Carbon fiber prepreg**
5. **Thermoset resin**
6. **Carbon fiber**

**Features**
- Suitability for resin coating
- Heat resistance
- Strength
- Most appropriate difference in release strength between the front and the back etc.
### Consolidated financial results for first quarter FY2018/3

<table>
<thead>
<tr>
<th></th>
<th>2018/3 1Q results</th>
<th>2017/3 1Q results</th>
<th>Increase (decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>60.7</td>
<td>48.4</td>
<td>12.3 12.3%</td>
</tr>
<tr>
<td>Operating income</td>
<td>5.0</td>
<td>3.7</td>
<td>1.2 33.3%</td>
</tr>
<tr>
<td>Profit before income</td>
<td>4.2</td>
<td>2.9</td>
<td>1.3 43.4%</td>
</tr>
<tr>
<td>Profit attributable</td>
<td>2.7</td>
<td>2.1</td>
<td>0.6 28.6%</td>
</tr>
</tbody>
</table>

#### Net sales

- 2017/3: 48.4 Billion yen
- 2018/3: 60.7 Billion yen
- Increase: 12.3 Billion yen, 25.4%

#### Operating income

- 2017/3: 3.7 Billion yen
- 2018/3: 5.0 Billion yen
- Increase: 1.3 Billion yen, 33.3%

#### Profit before income taxes

- 2017/3: 2.9 Billion yen
- 2018/3: 4.2 Billion yen
- Increase: 1.3 Billion yen, 43.4%

#### Profit attributable to owners of parent

- 2017/3: 2.1 Billion yen
- 2018/3: 2.7 Billion yen
- Increase: 0.6 Billion yen, 28.6%
### Printing and Industrial Materials Products

<table>
<thead>
<tr>
<th>Segment</th>
<th>2018/3 1Q results</th>
<th>2017/3 1Q results</th>
<th>Increase (decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing and Variable Information Products Operations</td>
<td>22.0</td>
<td>12.9</td>
<td>9.1 (70.3%)</td>
</tr>
<tr>
<td>Industrial and Material Operations</td>
<td>8.1</td>
<td>7.6</td>
<td>0.5 (6.8%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Segment net sales</th>
<th>2018/3 1Q results</th>
<th>2017/3 1Q results</th>
<th>Increase (decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.1</td>
<td>20.5</td>
<td>9.6 (46.8%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Segment operating income</th>
<th>2018/3 1Q results</th>
<th>2017/3 1Q results</th>
<th>Increase (decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.7</td>
<td>0.6</td>
<td>0.0 (6.8%)</td>
<td></td>
</tr>
</tbody>
</table>

### Graphs

**Printing and Variable Information Products Operations sales**

**Industrial and Material Operations sales**

**Segment net sales**

**Segment operating income**
## Electronic and Optical Products

<table>
<thead>
<tr>
<th>Segment</th>
<th>Net sales / Operating income by operational segment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2018/3 1Q results</td>
</tr>
<tr>
<td>Advanced Materials Operations Operations</td>
<td>11.6</td>
</tr>
<tr>
<td>Optical Products Operations Operations</td>
<td>9.4</td>
</tr>
<tr>
<td>Segment net sales</td>
<td>21.0</td>
</tr>
<tr>
<td>Segment operating income</td>
<td>2.8</td>
</tr>
</tbody>
</table>

### Graphs

#### Advanced Materials Operations sales

- 2017/3: 9.3, 10.6, 12.1, 11.0, 11.6
- 2018/3: 9.5, 10.5, 9.9, 10.3, 9.4

#### Optical Products Operations sales

- 2017/3: 9.5, 10.5, 9.9, 10.3, 9.4
- 2018/3: 9.5, 10.5, 9.9, 10.3, 9.4

#### Segment net sales

- 2018/3: 20.0, 2.6, 2.7, 1.8, 2.8

#### Segment operating income

- 2017/3: 2.0, 2.6, 2.7, 1.8
- 2018/3: 2.0, 2.6, 2.7, 1.8
### Paper and Converted Products

#### Net sales / Operating income by operational segment

<table>
<thead>
<tr>
<th>Segment</th>
<th>2018/3 1Q results</th>
<th>2017/3 1Q results</th>
<th>Increase (decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine and Specialty Paper Products Operations</td>
<td>4.1</td>
<td>4.0</td>
<td>0.1 3.0%</td>
</tr>
<tr>
<td>Converted Products Operations</td>
<td>5.4</td>
<td>5.0</td>
<td>0.4 7.6%</td>
</tr>
<tr>
<td>Segment net sales</td>
<td>9.5</td>
<td>9.0</td>
<td>0.5 5.6%</td>
</tr>
<tr>
<td>Segment operating income</td>
<td>1.5</td>
<td>1.1</td>
<td>0.4 33.6%</td>
</tr>
</tbody>
</table>

- **Fine and Specialty Paper Products Operations sales**
  - 2017/3: 4.0, 4.1, 3.9, 4.4, 4.1
  - 2018/3: 5.0, 5.2, 5.3, 5.2, 5.4

- **Converted Products Operations sales**
  - 2017/3: 5.0, 5.2, 5.3, 5.2, 5.4
  - 2018/3: 6.0, 6.2, 6.3, 6.2, 6.4

- **Segment net sales**
  - 2018/3: 10.0, 10.2, 10.2, 10.6, 10.5

- **Segment operating income**
  - 2017/3: 1.1, 1.2, 1.7, 1.7, 1.5
  - 2018/3: 1.2, 1.2, 1.8, 1.8, 1.6
Forecasts of consolidated financial results for FY2018/3

<table>
<thead>
<tr>
<th></th>
<th>2018/3 full year forecasts</th>
<th>2017/3 full year results</th>
<th>Increase (decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>250.0</td>
<td>206.0</td>
<td>44.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>21.4%</td>
</tr>
<tr>
<td>Operating income</td>
<td>20.0</td>
<td>16.6</td>
<td>3.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20.5%</td>
</tr>
<tr>
<td>Profit before income taxes</td>
<td>19.5</td>
<td>15.4</td>
<td>4.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>26.6%</td>
</tr>
<tr>
<td>Profit attributable to owners of parent</td>
<td>13.5</td>
<td>11.5</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17.9%</td>
</tr>
</tbody>
</table>
Forecasts of net sales and operating income for FY2018/3 by operational segment

<table>
<thead>
<tr>
<th>Segment</th>
<th>2018/3 forecasts (Billion yen)</th>
<th>2017/3 results (Billion yen)</th>
<th>Increase/Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing and Industrial Materials Products</td>
<td>125.2</td>
<td>85.7</td>
<td>39.5 (46.2%)</td>
</tr>
<tr>
<td>Industrial and Material Operations</td>
<td>36.6</td>
<td>30.6</td>
<td>6.0 (19.7%)</td>
</tr>
<tr>
<td>Variable Information Products Operations</td>
<td>88.6</td>
<td>55.1</td>
<td>33.5 (60.8%)</td>
</tr>
<tr>
<td>Segment net sales</td>
<td>215.5</td>
<td>146.3</td>
<td>69.2 (47.2%)</td>
</tr>
<tr>
<td>Segment operating income</td>
<td>4.8</td>
<td>1.7</td>
<td>3.1 (187.1%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Segment</th>
<th>2018/3 forecasts (Billion yen)</th>
<th>2017/3 results (Billion yen)</th>
<th>Increase/Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic and Optical Products</td>
<td>47.0</td>
<td>43.0</td>
<td>4.0 (9.2%)</td>
</tr>
<tr>
<td>Optical Products Operations</td>
<td>39.8</td>
<td>40.2</td>
<td>(0.4) (0.9%)</td>
</tr>
<tr>
<td>Fine and Specialty Paper Products Operations</td>
<td>17.0</td>
<td>16.5</td>
<td>0.5 (3.3%)</td>
</tr>
<tr>
<td>Converted Products Operations</td>
<td>21.0</td>
<td>20.6</td>
<td>0.4 (1.7%)</td>
</tr>
<tr>
<td>Segment net sales</td>
<td>98.0</td>
<td>93.6</td>
<td>4.4 (4.7%)</td>
</tr>
<tr>
<td>Segment operating income</td>
<td>9.4</td>
<td>9.2</td>
<td>0.2 (2.7%)</td>
</tr>
</tbody>
</table>

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<tr>
<th>Segment</th>
<th>2018/3 forecasts (Billion yen)</th>
<th>2017/3 results (Billion yen)</th>
<th>Increase/Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper and Converted Products</td>
<td>38.0</td>
<td>37.1</td>
<td>0.9 (2.4%)</td>
</tr>
<tr>
<td>Segment net sales</td>
<td>38.0</td>
<td>37.1</td>
<td>0.9 (2.4%)</td>
</tr>
<tr>
<td>Segment operating income</td>
<td>5.8</td>
<td>5.8</td>
<td>0.0 (0.6%)</td>
</tr>
</tbody>
</table>

*Note: All percentages are compared to the previous fiscal year.*
**Dividend**

*Trend in dividends per share (yen)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Result</th>
<th>Forecast</th>
<th>Payout Ratio (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/3</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009/3</td>
<td>20</td>
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<tr>
<td>2010/3</td>
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<tr>
<td>2011/3</td>
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<tr>
<td>2012/3</td>
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<td>2014/3</td>
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<tr>
<td>2015/3</td>
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<td>2016/3</td>
<td>54</td>
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<td></td>
</tr>
<tr>
<td>2017/3</td>
<td>66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018/3</td>
<td>66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Forecast)
Title  LIP (LINTEC INNOVATION PLAN) -2019

Period  From April 2017 to March 2020

Basic Policy  Deepening innovation aimed at driving new growth

Key initiatives  1. Strengthening of regional strategy
                2. Creation of new value
                3. Bolstering the corporate structure
                4. Activities for realizing a sustainable society

Major numerical targets
- Net sales: ¥270.0 billion
- Operating income: ¥25.0 billion
- Operating profit margin: More than 9%
- ROE (Return on equity): More than 9%
Recent acquisition results

○ MACTAC AMERICAS, LLC

Establishment : 1959
Registered Office : Ohio, the United States
Number of Employees : 496 (as of the end of December, 2016)
Business Description : Manufacture and sales of label materials for printing, VIP label materials, graphic sheets, industrial and medical tapes, etc.
Net Sales : 34.2 billion yen (Fiscal year ended December 31, 2016)
Operating Income : 3.6 billion yen (Fiscal year ended December 31, 2016)
Acquisition Price : Approx. USD 270 million*  * Debt assumption is not included
Ratio of Membership Interests to be Acquired : 100%
Closing Date : December 1, 2016

- Full-scale entry into the North American market of adhesive papers and films for labels
- Expansion of sales of LINTEC products using MACTAC AMERICAS’ sales channels

Share of net sales

- Label materials for printing, VIP label materials : 80%
- Graphic sheets : 11%
- Industrial and medical tapes, etc. : 9%
Recent acquisition results

Overview of three companies in Europe and the US that became subsidiaries after October 2016

**VDI, LLC**

Establishment: 1971  
Registered Office: Kentucky, the United States  
Number of Employees: 36  
(as of the end of December, 2016)  
Business Description:  
Manufacture and sales of functional films  
Net Sales: 1,070 million yen  
(Fiscal year ended December 31, 2016)  
Operating Income: 20 million yen  
(Fiscal year ended December 31, 2016)  
Acquisition Price: USD 26 million*  
* Debt assumption is not included  
Ratio of Membership Interests to be Acquired: 100%  
Closing Date: October 31, 2016

- Use of metallizing technologies, including metal deposition and sputtering, which LINTEC did not have  
- Development of operations in a new field

**LINTEC GRAPHIC FILMS LIMITED**

Establishment: 1993  
Registered Office: Buckinghamshire, the United Kingdom  
Number of Employees: 18 (as of the end of October, 2016)  
Business Description: Processing and sales of label materials for printing, graphic sheets, etc.  
Net Sales: 850 million yen  
(Fiscal year ended October 31, 2016)  
Operating Income: 130 million yen  
(Fiscal year ended October 31, 2016)  
Acquisition Price: GBP 7.3 million  
Ratio of Shares to be Acquired: 100%  
Closing Date: November 30, 2016

- LINTEC GRAPHIC FILMS sells LINTEC products in European market under a licensing agreement concluded in 2010.  
- Acceleration of customer acquisition using the company’s marketing capability and sales network
Company motto and Mission statement

Company motto

Sincerity and Creativity

Mission statement

The company name LINTEC derives from “linkage” and “technology,” two key components of our business philosophy, which emphasizes the importance of close relations, inside and outside the company, and leading-edge R&D programs. By bringing these together to develop innovative solutions, we have established a reputation in Japan and overseas as a dynamic and reliable company that contributes to the prosperity of our stakeholders, to the growth of our industry, and to a brighter future for society as a whole. And underpinning all of our business activities is an unwavering emphasis on “Sincerity and Creativity,” the twin values enshrined in our company motto.

For tomorrow we build today
This material includes forward-looking statements, such as forecasts of business results, based on information currently held and assumptions that have been judged as reasonable by the Company.

The Company cannot guarantee the accuracy of these statements or definitively assure the realization of future numerical targets and policies.

Actual business results, etc., may vary due to various factors and circumstances.