

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD

Form 6-K

July 19, 2010

**1934 Act Registration No. 1-14700
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549**

FORM 6-K

**REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16 OF
THE SECURITIES EXCHANGE ACT OF 1934**

For the month of July 2010

**Taiwan Semiconductor Manufacturing
Company Ltd.**

(Translation of Registrant's Name Into English)

**No. 8, Li-Hsin Rd. 6,
Hsinchu Science Park,
Taiwan**

(Address of Principal Executive Offices)

(Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.)

Form 20-F Form 40-F

(Indicate by check mark whether the registrant by furnishing the information contained in this form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.)

Yes No

(If "Yes" is marked, indicated below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82: _____.)

TSMC Begins Construction on Gigafab™ In Central Taiwan

Taichung, Taiwan, R.O.C. July 16, 2010 TSMC (TWSE: 2330, NYSE: TSM) today held a groundbreaking ceremony in Taichung's Central Taiwan Science Park for Fab 15, TSMC's third 12-inch (300mm) Gigafab™ and an important milestone in the company's pledge to expand investment in Taiwan.

The groundbreaking ceremony was conducted by TSMC Chairman and CEO Dr. Morris Chang. Science Parks have played a critical role in the development of Taiwan's high-tech industry. They have also provided important support to TSMC as we grew to become a leading global semiconductor company with its roots in Taiwan, Dr. Chang said. Over the past two decades, TSMC has flourished in the Hsinchu and Tainan science parks, and our groundbreaking for Fab 15 today sets the foundation for TSMC to reach new heights.

TSMC has worked unceasingly to improve its technology leadership, manufacturing excellence, and customer partnership to join together with our fabless and IDM customers to forge a powerful competitive force in the semiconductor industry. This groundbreaking for Fab 15 in the Central Taiwan Science Park shows our commitment to providing our customers with advanced technology and satisfying their capacity needs. And as capacity in Fab 15 grows, it will create 8,000 high-quality job opportunities, demonstrating TSMC's dedication to corporate social responsibility, Dr. Chang added.

Fab 15 will be TSMC's third Gigafab™, or fab with capacity of more than 100,000 12-inch wafers per month, and will also be TSMC's second Gigafab™ equipped for 28nm technology. Construction will be divided into four phases, and total investment over the next several years is expected to exceed NT\$300 billion. TSMC is scheduled to begin equipment move-in for the Phase 1 facility in June 2011, with volume production of 40nm and 28nm technology products for customers in the first quarter of 2012. More advanced process nodes will be introduced as TSMC's technology development continues to advance.

In addition, to meet strong customer demand as we build Fab 15, TSMC will continue to expand capacity at Fab 12 in Hsinchu and Fab 14 in Tainan. Combined capacity of Fab 12 and Fab 14 currently exceeds 200,000 12-inch wafers per month, and is scheduled to exceed 240,000 12-inch wafers per month by the end of this year, underscoring our commitment to providing steadfast support to our customers.

Fab 15 will be TSMC's next green fab following Fab 12 and Fab 14, incorporating green concepts in energy conservation and pollution control in its design, including a process water conservation rate of 85%, reclamation of rainwater, recirculation and reuse of general exhaust heat, and development of solar power generation and LED lighting applications. TSMC's goal is to reach zero emissions of greenhouse gases.

Fab 15 Background Information

- 1 Total area of site: 18.4 hectares

- 1 Type of project: TSMC's third 12-inch GigafaTM with two fab buildings and one office building.

- 1 Building area: 430,000 square meters

- 1 Clean room area: 104,000 square meters (approximately 14 soccer fields)
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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Taiwan Semiconductor Manufacturing Company Ltd.

Date: July 16, 2010

By /s/ Lora Ho
Lora Ho
Vice President & Chief Financial
Officer