

# Jakarta's Venus Star

The company PT Subur Semesta was founded in 1978 in Jakarta on Java, one of the 17,000 islands that make up Indonesia. 60% of the 220 million inhabitants can be found on Java of which 15 million live in the capital city Jakarta – it could even be a few million more. To be noticed here you need an extremely bright star and it is for that reason that PT Subur Semesta uses the planet Venus as their trademark. The wonderful ambiguity with the God of Love Venus can only make you smile. One of the founders of the company, Liong Ten Fook, came up with the name – an ingenious idea!

But Liong Ten Fook was not the only founder; his partner was back then and still is now Thiang Tiong An. "We originally started as a telephone accessory factory. Later on we added emergency lights, that is, lights with built in batteries that are used everywhere whenever there is a power outage", remembers Liong Ten Fook.

PT Subur Semesta entered the satellite arena in 1989 when they began to offer analog satellite receivers. In 2000 the first digital receiver appeared and in 2002 it all turned really serious when the production of satellite dishes began. In the meantime the company expanded its management: Tjia Tek Ijoe climbed aboard as a partner. Today PT Subur Semesta is run by these three partners.

A large amount of money was invested in 2004 explains Tjia Tek Ijoe: "We acquired a machine press so that we could manufacture the dish segments ourselves." Heavy investment in the company occurred again one year later: "We bought a powder painting system to spray paint the segments."

But it was still not enough. Tjia Tek Ijoe revealed to us that there's yet another large investment: "We invested another USD 600,000 for the fabrication of mesh antennas. This lets us produce 20,000 dishes every month."

**In western Jakarta, not too far from the international airport, can be found PT Subur Semesta, brand name Venus.**

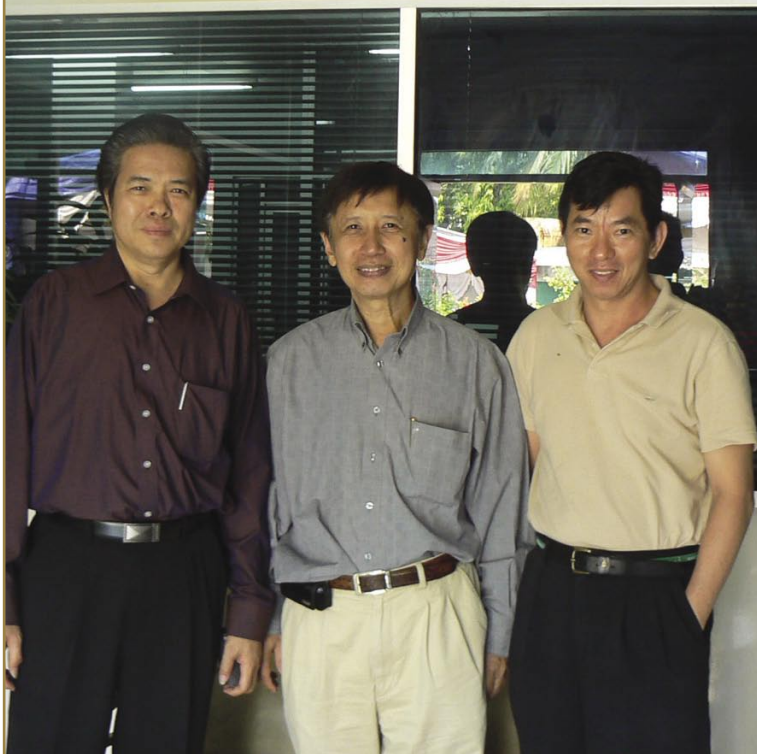
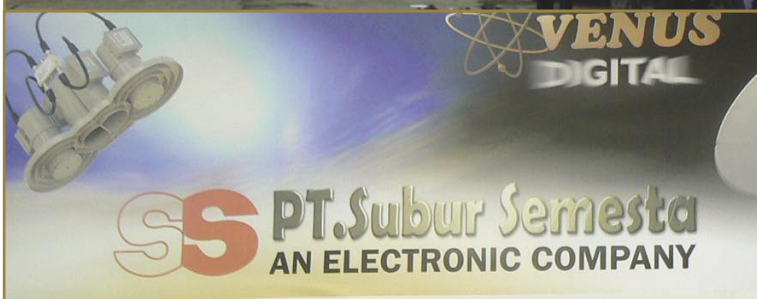
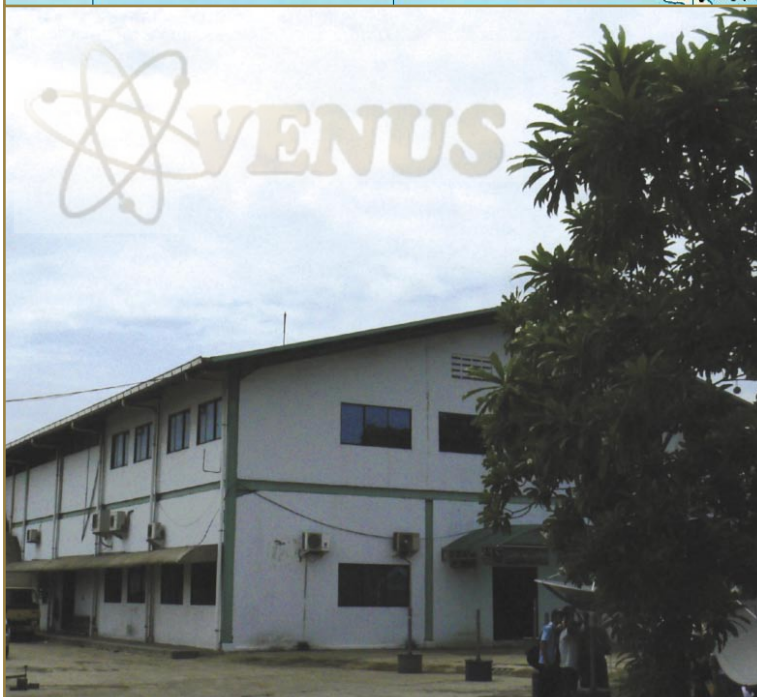
**The offices are at the front of the building with the windows, and towards the back are the factory buildings that house the machines to manufacture the dish antennas. The company employs a total of 200 people of which 60 are involved with the manufacture of dishes. They work from 8AM to 5PM Monday thru Friday and on Saturdays to 2PM.**

Those are large numbers; we wanted to know how many solid antennas are being manufactured today: "At the moment, our production capacity is at about 15,000 antennas per month of which the majority are sold domestically", explained Thiang Tiong An, "Our company supplies approximately 15% of the Indonesian market."

Of their total production, 80% is delivered domestically, the rest is exported. According to Thiang Tiong An, "40% of our dish production goes to Thailand and Vietnam, the remainder goes to Brunei with a small percentage going to Australia."

"Naturally we want to expand our exports", explains Tjia Tek Ijoe, "We are investing heavily in quality." PT Subur Semesta

**PT Subur Semesta's three partners: From the left, Liong Ten Fook, Finance Director, Tjia Tek Ijoe, Managing Director, and Thiang Tiong An, Technical Director**





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◀ A devious discovery from Venus: this small tool makes it very easy to precisely align a dish.

is working on getting ISO certified. "We are expecting the test results in April 2008", reports Tjia Tek Ijoe proudly, "We applied for ISO 9001 and 14001." This means that PT Subur Semesta also follows the most stringent environmental guidelines. "In order to have international success, we have to have quality in every respect", confirms Tjia Tek Ijoe, "For the coating of our dishes

◀ PT Subur Semesta organizes seminars for installers eight times a year. Distributors send their technical people to learn how to quickly and efficiently set up a packaged 1.8-meter antenna with dual-feed LNB. To make these seminars even more attractive, time limits are set and winners are announced. Food and drink is also taken care of as can be seen by the accommodation tent in the background. A large loudspeaker is also set up there to keep the young installers happy with loud music. Each seminar handles 60 installers where they are taught to install a dish such that the dual-feed can successfully receive PALAPA C2 at 113° east and TELKOM at 108° east.

◀ The installers take great care to remain within the preset time limits. That would be 45 minutes from the box to successful reception using a dual-feed LNB and 75 minutes for the successful set up of a motorized system. Since Jakarta is located so close to the Equator, the declination angles are very small.

◀ Protecting the environment at PT Subur Semesta: Tjia Tek Ijoe shows us the waste water treatment system the company invested in so that they comply with ISO environmental standards.

we use, for example, lead-free paints from Akzo Nobel and even the dish is made of the quality material Galvalume, a product of the manufacturer Bluescope in Australia. The material consists of 55% aluminum and 45% Zinc and is therefore especially resistant and durable."

Finance Manager Liong Ten Fook is proud of PT Subur Semesta's sales figures. "Every year there's an increase", he comments. "The year before it was 10% less while in 2008 we expect 10% more."

50% of their sales are attributed to TVRO products such as dishes and the installation of satellite receivers as well as the sale of imported actuators and LNBs. Then there's also the sale of their "homemade" 2in1 and 4in1 products: that would be Combi-feeds for C-band LNBs with offsets of 5° with the 2in1 and 5° -2.5° -5° with the 4in1. Unfortunately, PT Subur Semesta can't really hope for any large business with this product since it's so easy to copy it.

Tjia Tak Ijoe gave us a look at their production: "40% of our dishes are made of steel, 40% are galvanized and 20% are made from Galvalume, the best dish material."

The Venus Star from Jakarta is well on the way to establishing itself in the international league, and could very well come out on top of the international market share with their quality dishes that happen to be "Made in Indonesia"!



# How a Solid Dish Antenna is Built



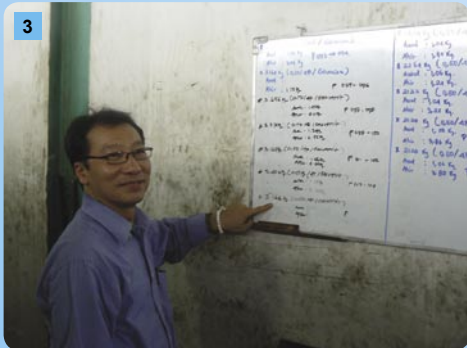
**1:** The roll of material for the solid dishes can be seen to the left. PT Subur Semesta offers three different materials: steel, galvanized steel and Galvalume, an improved aluminum variation. The thickness of the material is 0.60 mm and a single roll weighs in at eight tons. The roll is loaded onto a dispensing machine in the background which feeds a cutting machine.



**2:** The segments are cut out of the roll. Six segments make up one dish. One roll takes about one work day to be completely cut into segments.



**4:** The cut segments are pressed into parabolic form using this machine. 500 tons of pressure is used to shape the segments. This machine is used for the 1.8-meter dish segments. A second press is used for the 1.5 and 1.65-meter segments.



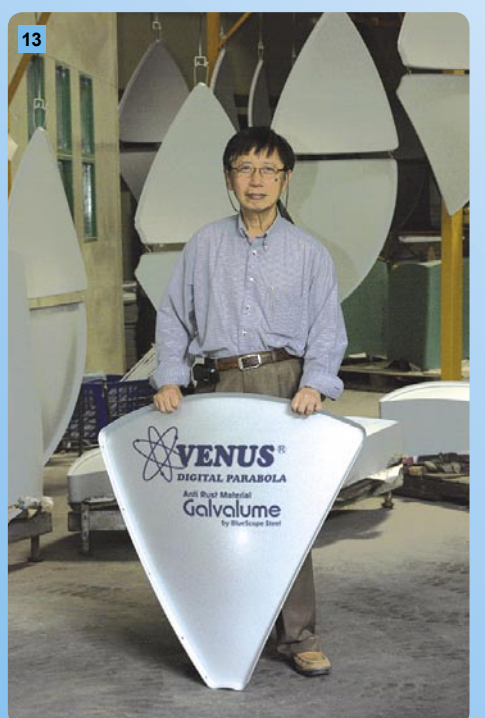
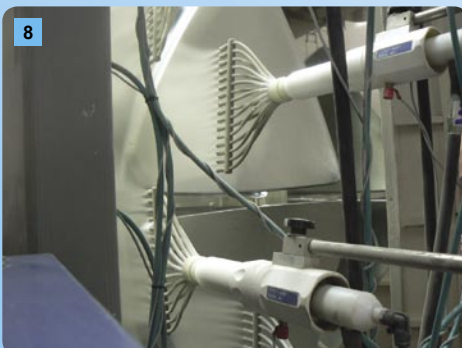
**5:** In the next step the mounting holes are punched and the cut edges are removed.



**6:** Every 12 seconds the segment blanks are stacked on top of each other.



**7:** The prepared segments arrive for spray painting. A conveyor belt is used to carry four





segments at a time through the machine. Care is taken to make sure that no damaged segments end up on the conveyor belt; they are manually removed. The conveyor belt runs a total of 300 meters and it takes one hour for a segment to reach the other side.

8: Automatic spray guns transfer the paint to the segments.

9: An employee takes care of spots manually.

10: The spray-painted segments are placed in a drying room after which they pass through quality control.

11: An employee uses a micrometer to check the paint thickness; it must be between 55 and 60µm.

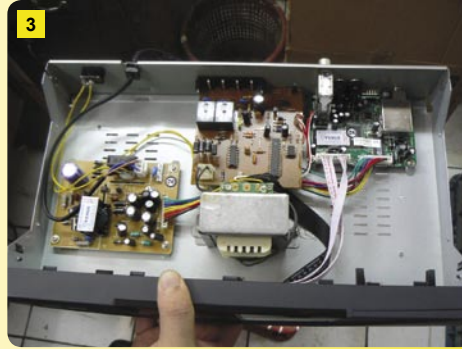
12: The finished segments. PT Subur Semesta also produces OEM dishes. Liong Ten Fook shows us here three samples: the Diamond dish goes to customers in Thailand, Unisat goes to Vietnam and BN sat to Brunei.

13: This is what a dish segment with the Venus name looks like: Tjia Tek Ijoe shows us a model from the Galvalume series. Domestically, the 1.8-meter dish is their bestseller and accounts for 90% of sales. On the export side, the 1.5 and 1.65-meter models are also offered and make up 10%; 80% of exports consist of the 1.8-meter model.

It wasn't always like that explains Tjia Tek Ijoe, "In 2007 the RCTI TV channel switched over to a very weak transponder on PALAPA C2. The first private TV channel in Indonesia is very popular but now everyone had to buy the 1.8-meter dish."



# Receiver Assembly at PT Subur Semesta



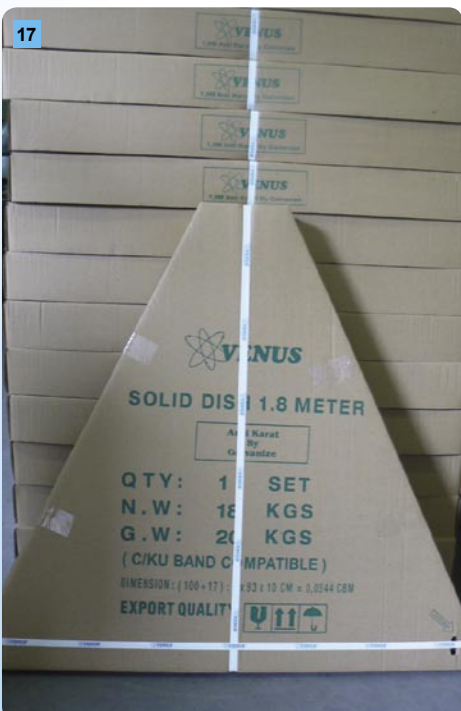
The joke was that the RCTI and satellite operator PALAPA belonged to the same company. Instead of assigning the TV channel from their own company to the best transponder, as would be expected, it had to make do with the weakest. Why? The strongest transponder could be sold for a much better price. This logic gave PT Subur Semesta a good amount of business with their larger dishes.

14: The finished segments are packed: six segments make up one complete antenna and are packaged together with the mounting ring.

15: The mounting ring is also made in-house and is made from a 5.4-meter long bar with 20x20mm sides.

16: The still-open mounting ring is welded together.

17: The complete six-segment dish package is ready to be shipped to the world.



1: From parts delivered by a Chinese manufacturer, PT Subur Semesta assembles satellite receivers with their own Venus name. The chassis for the receivers are produced locally. The power supplies can be seen to the left with the main boards to the right.

2: One of the testing stations: every receiver has its components and its electrical properties checked out

3: A look inside one of the assembled Venus receivers

4: Jhonny Yang is responsible for the software in the Venus receiver. Here he is standing in front of the burn-in station. Every receiver goes through a four-hour burn-in test to identify any weaknesses before the receiver is delivered to the customer.

