PRODUCTION BELT FURNACES

HENGLI – THE UPCOMING FORCE
TORREY HILLS TECHNOLOGIES

THE COMPANY – FAST GROWING

THE FURNACES – COMPETITIVE IN SO MANY WAYS

THE CUSTOMERS – SATISFIED AND COMING BACK FOR MORE

THE SERVICE – YOUR MIND AT EASE
ABOUT THE COMPANY

THT – Trusted and Honored

- San Diego’s Top 100 Fastest Growing Privately Owned Companies, 2007-2010, 2012
- SBA San Diego District Exporter of the Year 2009
- IMAPS (International Microelectronics Symposium) President’s Award 2008 & 2012
Torrey Hills Technologies, LLC is the worldwide sales and marketing partner for ECRIM’S HENGLI furnaces.

Torrey Hills also provides post-sales technical support world-wide from San Diego and Hong Kong.

The partnership started in 2004.
ECRIM (Eastern China Research Institute of Microelectronics) – Furnaces fabricated and marketed under Hengli Eletek brand

Established in 1968

Products: Microelectronics packaging products and equipment

Sales (2011): ~$50M

Employee (2011): ~1000

ISO9001:2008 certified and CE certified.
REWARDING PARTNERSHIP

Australia
Austria
Canada
China
Hungary
India
Indonesia

Israel
Italy
Malaysia
Mexico
Netherlands
Russia
Singapore

Many More

US
Sri Lanka
Slovenia
South Africa
Switzerland
Vietnam
UK
Spain
South Korea
Turkey
Taiwan
FURNACE CUSTOMERS WORLDWIDE

- IBM
- Eaton
- Coilcraft
- OYO Geospace
- Neways Micro
- Royal Canadian Mint
- Varsi

- Apple
- Schott
- Materion
- Wells Mfg
- Johanson
- Skyworks
- Semtech

- NASA
- Sienna Technologies
- SCL/ISRO
- Hilti
- International Rectifiers
- Rayotek Scientific
- And many more
THE FURNACES

Applications
• Thick Film
• Thin Film
• Solar Cell
• Annealing
• Brazing
• DBC
• Lithium battery
• Glass to Metal Seal
• HTCC & LTCC
• Other Various Heat Treatment

Furnace Type
• HSK Series Fast Fire
• HSH Series IR Firing
• HSA Series Controlled Atmosphere
• HSG Infrared Drying
• HSF Convection
• Box Oven
• Pusher Kiln
• And more

Brand New

Robust

Safe

Mature
THICK FILM FURNACES

HSK Series Fast Fire Belt Furnace

- We ship around 100+ units per year
- Widely used in thick film/microelectronics packaging and other related air firing (glass tile)
- We also retrofitted many BTU furnaces in Taiwan and SE Asia
ATMOSPHERE FURNACES

HSA Series Belt Furnaces

• Sealing, metalizing, brazing, oxidizing, annealing

• Chip bonding, metal package, HTCC, DBC, VFD, PDP

• Nitrogen and Hydrogen Capable
CONVECTION FURNACES

HSF Series Belt Furnaces

- SMD reflow soldering, chip joining
- Post-mold curing
- IR and/or Hot Air circulation
- Nitrogen Capable
DRYING FURNACES

HSG Series Belt Furnaces

- Drying and Curing of water and organic solvent such as PV cell, thick film drying, epoxy curing, etc.
- Infrared heating method
- Highly Customizable
HSK and HSH Series Belt Furnaces

• 1st Generation Silicon Crystalline Solar Cells

• 2nd Generation Thin Film Solar Cells, CdTe/CIGS
  Currently serving one of the biggest players in this industry

• 3rd Generation DSSC (Dye Sensitized Solar Cells)
  Leader in DSSC processing furnaces
SOLAR CELL FURNACE CUSTOMERS

IBM
Alion
Dyesol
3G Solar
Solaronix
1366 Tech
Ferro

First Solar
Risun Solar
Suniz
PV Nano Cell
AQT Solar
Soprat
Crystal Solar

NAREC
Applied Nanotech
BESU
ITER
China United Cleaning
And many more

And many more
SOLAR CELL – 3G SOLAR (ISRAEL)
SOLAR CELL – DYESOL (AUS)

Snapshot from a video on Dyesol’s website. (www.dyesol.com)
LTCC FURNACES

- Tunnel Version

- Batch Version
EXCELLENT FEATURES

• **Highly Customizable design** in which a furnace is built according to your specific requirements.

• **Good Temperature Uniformity** of +/- 2 C across the belt.

• **Good furnace control** system which independently controls the temperature of each zone and the belt speed.

• **Clean Furnace Chamber** made out of either high quality Stainless Steel SUS or Inconel 601 alloy.

• **Safety Protection** finger-guard, EMOs, high voltage cover, mechanical interlock, grounded side-panels, and 24V on all Human Interface control panels.

• **Options** such as Windows PC Control System, Ultrasonic Belt Cleaner, Uninterruptible Power Supply, Oxygen Content Analyzer, Dew Point Monitor.
COMPARATIVE ADVANTAGES

A  Service
- Customers are very happy with our service and support that they keep coming back for more furnace equipments from Torrey Hills Tech

B  Delivery
- We package, ship, and deliver the equipment directly to your facility
- Lead time is typically 5 weeks shorter than average

C  Cost
- Up to 35% less
REPEAT CUSTOMERS

- ALS – bought $2 + 2$ in $2$ years
- Coilcraft – bought $1 + 2 + 1 + 2 + 2$ in $5$ years
- Cardinal CG – bought $1 + 1$ in $2007/08$
- Shielding Express – bought $2 + 2$ ($2008/09$)
- Dye Sol – bought almost 20 furnaces from $2004$-date
- Noratel in India – bought $1 + 1$
- Solaronix – bought $1 + 1$
- #1 Solar Company First Solar in the US – bought $1 + 2$
- Ferro – bought $1 + 1$
- China United Cleaning Tech – bought $26 + 32 + 32$ (total of 90 in 2 years) and many more.
REFERENCES

References available from these US & Mexico Based Customers:

- International Rectifier (replaced two RTC furnaces)
- Shielding Express in MA
  - [http://www.youtube.com/watch?v=anpX45i4Hms](http://www.youtube.com/watch?v=anpX45i4Hms)
  - [http://www.youtube.com/watch?v=ijmykWU3lzE](http://www.youtube.com/watch?v=ijmykWU3lzE)
  - [http://www.youtube.com/watch?v=xJP7fn2aAA8](http://www.youtube.com/watch?v=xJP7fn2aAA8)
- Cardinal CG in WI
- Rayotek in San Diego, California
- Solaronix in Switzerland
- All five companies can provide references
- Shielding Express, Rayotek, Solaronix, and Cardinal can offer tours
So far ALL of our customers liked our services!

Services include installation, start-up support, warranty repairs, assistance and consultation, we are dedicated to support our customers 24 hours everyday all year around.

We guarantee the highest caliber of business and personal attention.

We arrange regular follow up services at the 1st, 3rd, 6th, and 12th month after installation.

24/7 POST-INSTALLATION TECHNICAL SUPPORT
“The performance of these furnaces is strictly World-Class! You'll notice many little things, like you'll be able to load across width of the belt, while maintaining uniform temperature.

Atmosphere control and consumption and profile stability are features you will be very happy about!

Delivery, installation and expert set-up by factory engineers, is included in the purchase price!

As you can tell, I have been very impressed by the quality, uptime and performance of these furnaces.”

Kenneth F. Reynolds, President, The LORAC Company
(the Furnace Guy)
PARTNERSHIP IN INDIA

EdgeTech Scientific Pvt. Ltd. is a well organized, professionally managed and vertically integrated Marketing and distribution company in India for high technology equipments and materials related to various streams of research and industry, with highly trained professionals, sales and service engineers located across metropolitan cities of India such as Mumbai, Kolkata and Chennai. Our joint venture started in 2011.
“In 2005, we acquired two continuous belt furnaces from Torrey Hills Technologies for our manufacturing facility in Tijuana, Mexico.

We have been using these two furnaces in high volume production ever since.

Their up time and performance has met and exceeded all of our expectations!”
Thank You!