

The Little University with the Big Reputation

When Brandenburg University of Technology (BTU) energy technology professor Harald Schwarz recently set off to visit the University of Sao Paulo in Brazil, the furthest thing on his mind was a red carpet reception. The Sao Paulo university is the largest in Brazil, whereas his own Cottbus-based technical university has less than 5,000 students. Sao Paulo can bask in its reputation as the country's and Latin America's top academic and research institute. The Cottbus university on the other hand, would never claim to count itself among the leading lights of the German academic world – observes the Berlin daily paper *Der Tagesspiegel*.

But a red carpet reception is exactly what he got. Schwarz has enjoyed similarly warm receptions in Shanghai, Peking, and Taiwan. All well and good for a visiting elite university professor, but hardly the sort of welcome normally accorded a professor from a provincial technical university in Eastern Germany. Cottbus is a city with a population of just over 100,000 in the Lausitz region in the state of Brandenburg. The landscape is scarred by working and derelict open-cast lignite mines. Looming over slag heaps are the superstructures of enormous brown coal excavators and the smokestacks of declining heavy industries.

Yet according to university president Walther Zimmerli, it is this otherwise uninspiring landscape which is responsible for the five star treatment BTU staff enjoy overseas. "Anyone who wants to work on energy supply in the future has to come to Cottbus because of its unparalleled laboratory facilities." Where other universities have to spend considerably to simulate optimal research conditions, BTU has these right in its backyard. Zimmerli calls the area a "living laboratory" with "real life" laboratory conditions. One thing the Lausitz region has in abundance is brown coal: where better to develop a way to burn it cleanly than here?

Innovations borne from working in this "living laboratory" have put the small university on the map – both at home and abroad. The unique research environ-

ment has allowed the Brandenburg university to develop a recipe for energy production and a technology much coveted by countries including Brazil and China. The university has built a state-of-the-art CO₂ free coal-fired power plant in partnership with Swedish energy giant Vattenfall. The Swedish power suppliers have invested EUR 70 million in the prototype plant which makes use of carbon capture and storage technology (located in the oppositely named mining town of Schwarze Pumpe – Black Pump – the plant is due to begin test operations this year).

Brandenburg's only technical university has already begun transferring the CO₂ free technology to countries around the globe. The university has also established partnerships with institutions as far flung as Chile and China, as well as just across the border in Poland. In the coming winter semester, BTU will offer a joint energy technology course of study with universities in Peking, Shanghai, Taiwan, Sao Paulo, Rio de Janeiro and Bela Horizonte.

The university affiliated Panta Rhei Interdisciplinary Research Institute for Lightweight Construction Materials is also building a growing international reputation. The research center specializes in technology transfer research geared to meet business lightweight materials



BTU Cottbus high voltage test equipment

needs. The research center has already established partnerships with Bombardier in the rail transportation sector and Daimler, VW, BMW and Thyssen-Krupp in the auto industry. The lightweight materials being developed by Panta Rhei for today's cars are a far cry from the resin composite body used for the iconic two-cylinder Trabant produced as Eastern Germany's response to scarcity of resources.

The international recognition currently enjoyed by the Cottbus university in the fields of energy technology and lightweight materials technology shows that even smaller, so-called provincial universities can build international reputations by adhering to founding academic principles. And BTU's mission statement? "BTU: Building-Technology Environment. Designing a sustainable future."



University building staircase [IKMZ]