

From Collective to

Interview: Rebuilding the East

2 From Collective to Joint-Stock Company

Rebuilding the East

4 Successful Integration

Fiber Optics

6 The Energetic Look

Glass Processing

8 Implementing Innovation Faster

Recycling

10 From Tube to Funnel

X-ray Protection Glass

12 High Tech for the Heart

Asia

13 Growth in Optics

Shipbuilding

16 Luxury Liner with Dots of Light

Architecture

19 Glass Prisms as Light Sources

Picture Glazing

20 Protection with True Rendition

Multimedia

22 Spherical Lenses Lead the Way to the Mass Market

Automotive Electronics

24 Sensor Improves Visibility

Fire Resistant Glass

26 Shopping without Boundaries

Glass Art

28 Composed Light

Prism

30 Short Reports from the Schott Group; Preview; Imprint

Dr. Leopold von Heimendahl and Dr. Udo Ungeheuer discuss the rocky road that Schott Jenaer Glas GmbH had to travel on its way to becoming profitable.

What did the situation in the glassworks in Jena look like to visitors from the west at the time of the change?

Dr. von Heimendahl: Socialism had left the glassworks in a very sad state. Although a showpiece enterprise, the quality of its products were by no means competitive on the world market. On top of this, the infrastructure was on its last legs with a massive workforce of over 4000 people and very poor productivity. The factory was also suffering from the collapse of the Comecon (Council for mutual economic assistance – an organization led by the Soviet Union) and the resultant loss of the markets in the east. This had a dramatically adverse effect for a company that was starting anew in a competitive environment.

How did Schott go about restructuring the company? What could be done to stabilize the factory's situation?

Dr. Ungeheuer: It very quickly became apparent that a completely new concept for the future and total refurbishment of the factory were required. In figures this meant investing 150 million euros. Jenaer Glaswerk was fully integrated into the Schott Group's operating strategy. We built new production facilities there, transferred others from elsewhere in the Schott Group and, in the case of "Borofloat", also developed a technology in Jena that is unlike anything anywhere else in the world. For another thing, manufacturing methods steeped in tradition had to be aban-

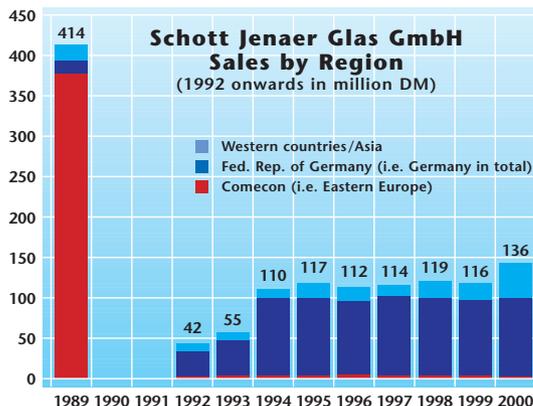


Dr. Udo Ungeheuer, member of the Schott Board of Management and Chairman of the Schott Jenaer Glas GmbH Supervisory Board

Schott reintegrated the glassworks in Jena into the group purely out of a sense of historical and moral obligation. Was that justifiable from a business point of view?

Dr. von Heimendahl: In 1991 we took on tasks and responsibilities without knowing what the consequences would be. After the partition of Germany, there were two Schott companies in existence with the same roots: the new factory in the west and the cooperative of state-owned factories in Jena. When the prospect of reunification became apparent, contacts between the factories were re-established. Starting in 1991, after some tough negotiations we acknowledged our origins and remained true to our word regarding the proclaimed reunification of the Schott businesses. In retrospect this was a very difficult balancing act between moral obligation and economic realities. From market and capacity viewpoints there was no reason for Schott in Mainz to take over Jenaer Glaswerk. Nevertheless, we quickly became infected by the "Jena virus". This was the enthusiasm the people in Jena had for their company and their fantastic commitment to creating a solid economic basis for this factory.

The collapse of the Comecon plunged the glassworks in Jena into a deep crisis. With the start of the refurbishment program new markets were being opened up all the time.



JOINT-STOCK COMPANY

done. Painful cuts were necessary, in staffing levels as well. This resulted in a long-lasting catastrophic economic situation. For years the losses were bigger than the turnover and it was only in 1999 that the factory reached break-even. But now Schott in Jena has ultramodern production facilities and a high standard of environmental protection.

Can you say that the reunification of the two factories has been a success and the gap between east and west eliminated?

Dr. von Heimendahl: After a lot of ups and downs, Schott has succeeded in integrating the Jena factory into the Schott Group. This involved a lot of

people in the east and the west, not least the excellent specialists in Jena who knew how to make efficient use of the technical help we provided. On the other hand, our staff in Mainz and other Schott companies avoided developing a "west is best" mentality. I am convinced that these were important reasons for our success in rebuilding the business in Jena. This was how the factory was

able to establish a stable economic basis. Today it produces internationally competitive products. This is definitely a positive example of the redevelopment of Eastern Germany that we hear so much about. As a result, the tragic period that our corporate history went through after the war has now, thanks to the dissolution of East Germany, come to a happy end with good prospects for the future.



*Chairman of the Schott Board of Management
Dr. Leopold von Heimendahl*

Ten years after privatization – would Schott today make the same decision in favor of a commitment to the factory in Jena?

Dr. Ungeheuer: Against the background of our corporate history the answer is an unequivocal yes. We identify ourselves with Jena. There were and there are many emotional links with Jena. It's where our founders Ernst Abbe and Otto Schott laid the foundations for the special glass industry in Europe. Our corporate constitution dating from the year 1896, which was drawn up in Jena, puts us under an obligation of special responsibility towards the company's employees. That applied and still applies of course also to those in the place where the company was founded. Today we would certainly implement many decisions more quickly in view of the business environment – globalization and stiffer competition – and there are many instances where we would make different decisions.

Schott has set up Schott Lithotec AG, a company belonging to the "New Economy" in Eastern Germany in the immediate vicinity of Schott Jenaer Glas. Why not near its customers in North America or Asia?

*Schott Jenaer Glas:
Successful reunification
with Schott*

Dr. von Heimendahl: There are several good reasons for manufacturing high performance optical materials for microlithography in Thuringia and thereby in Germany. For one thing the proximity to Mainz where Schott's research headquarters are and where high-homogeneity optical glasses and glass-ceramics for wafersteppers are made. For another thing, through acquisitions we have been able to concentrate know-how and experience in fused silica and calcium fluoride in Jena. With this highly sophisticated manufacturing, we are fully capable of competing on a worldwide basis from a location in Germany. Besides, one of our most important customers for these optical materials – namely our sister company Carl Zeiss – is located in the West European home market.

Today Schott in Jena has the most efficient production facilities in the world for the manufacture of calcium fluoride monocrystals for lenses in wafersteppers for the manufacture of the next generation of microchips ■