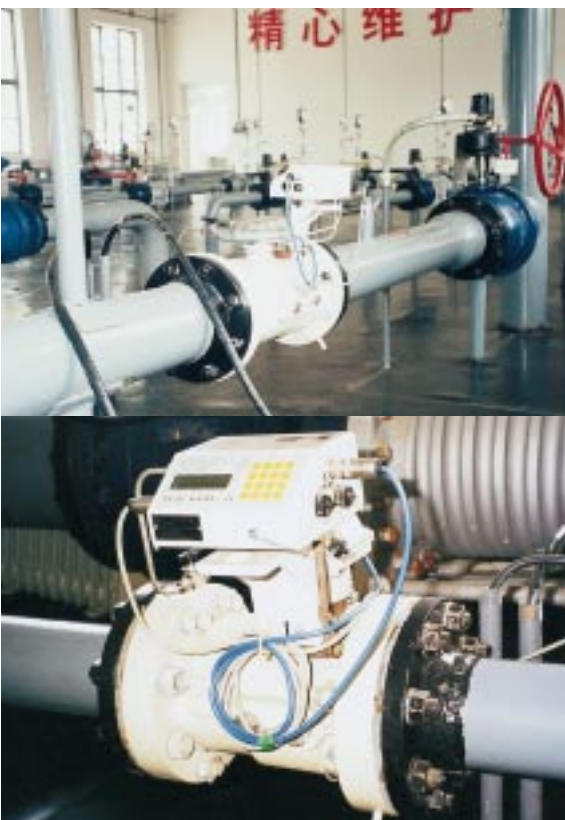


# Turbine Meters for Beijing High Pressure Gas Network

*As China shows growing concern for environmentally-friendly energy, the use of natural gas to reduce air pollution is gaining widespread attention. This trend is set to bring about changes in the basic structure of energy. For the first time in China's history, Gas is on the top of the agenda of China's fundamental construction projects in this Millenium. Beijing, its capital city, is one of the most favored cities to benefit from its policies.*

*Beijing Capital Airport – extra-high pressure station: TRZ G650 with EK-88/K and ...*



*... TRZ G400 with EK-88/K*

Due to new accesses to several natural gas resources, Beijing has tremendously improved its gas structure. Step by step, coal gas is being replaced by clean natural gas, and natural gas is being made available to more and more people in this city. Natural gas consumption in Beijing increased to 64.8 million cubic meters in 1999 from less than 40 million cubic meters in 1998, and this figure is expected to go up significantly for the coming years. To meet the requirement of this development, old high-pressure stations have to be updated, and new stations have to be built.

***Elster turbine meters are playing a major role in these changes.***

Elster could not have entered the Beijing market at a better time. In 1997, Beijing Natural Gas Company was sizing the right meter for its new high-pressure stations in Beijing Capital Airport. Among all the suppliers, Elster was selected although they were newly involved in the marketplace. The main reasons for their decision were:

- 1. Ball bearings:**  
The Elster ball bearings are larger than other supplier's; besides radial ball bearings, Elster meters have extra axial ball bearings for meters over DN200; these features enhance the meter's ability to withstand pressure shocks.
- 2. Measuring cartridge:**  
Elster has a unique design of measuring cartridge, this provides customers with the distinct feature of quick onsite changing of the cartridge without affecting the accuracy of the meter.
- 3. Esteemed reputation:**  
Elster turbine meters are proven in performance especially for custody transfer application. What's more, Elster has been well known for its turbine meters for nearly 70 years.

***Pressure for high pressure stations is:***

P = 11 – 25 bar gauge

***Three TRZ meters were chosen for this application, all of them were equipped with EK-88/K:***

- G2500, DN300, PN25
- G400, DN100, PN25
- G650, DN150, PN16

The meters were installed upstream of the regulators in this station, thus reducing the size of the meters selected. The meters have been installed since early 1998. The customers are happy with the performance of the meters.

Following this success, Beijing Natural Gas company has selected and used Elster meters for other high-pressure stations with sizes ranging from DN100 to DN500. Both TRZ turbine meters and Quantometers have been used. In June 2000, Elster won the bid for 13 large-size Quantometers. This bid consists of 4 DN500 and 9 DN400 units. These meters are meant to be installed in high-pressure stations.

## ELSTER AROUND THE GLOBE



*In total, there are more than 1000 Elster turbine meters installed in China. Among them, there are about 100 units used in high-pressure stations. Elster's award of the certification of "Permanent China Pattern Approval" for Metering Devices in 1998 has greatly improved Elster's sales in Beijing as well as in other cities of China. And with the development of the gas industry in China, it is foreseeable that Elster will play an important role in high-pressure measurement applications.*

*Elster high-pressure turbine meters ready for the long trip*



WANG HONG, ELSTER-AMCO BEIJING