

100 days in the new management position

- **Where does ROSTA stand as a company?**
- **How does the market respond to our product range?**
- **How do our international customers see us?**
- **How good is our sales network?**
- **Is our technology up to date?**
- **What problems will we face in future?**



Marc Mollenkopf – General Manager/CEO

Dear reader

During the 100 days of his second reign, Napoleon probably failed to analyse France's situation correctly, otherwise he would not have taken on the strengthened Alliance armies at Waterloo with his own weakened troops.

During my first 100 days as managing director/CEO of ROSTA AG, I have analysed our company and studied the above questions very closely. It took me about three months to gain a clear overview of the company's specific situation.

In general terms, ROSTA AG is in a strong position. It has developed positively over the past 10 years. Despite several crises, (2002/03 and 2008/09), our business activity, thanks mainly to the great diversification of our customers in the industry, has never suffered a serious slump. The "niche poli-

cies" pursued by sales in recent years have paid off – if for example the sale of components for textile machines tailed off, we were able to compensate in the mineral processing sector. Financially the company with its four subsidiaries is on a sound footing and has sufficient funds for the investments that will be necessary in the future.

The **novelty effect** and our former **monopoly position** are a thing of the past. It is only by the steady expansion of our product range that we can keep making inroads into new niche markets for the use of our unique rubber suspension technology. There is no shortage of new ideas in the company and we will be bringing a number of new components to the market in near future.

Among our **international clients**, ROSTA enjoys a good reputation (export rate > 95%). Our catalogues and the website are described as more detailed and more technically competent than those of other component manufacturers. Our machine components are long-lasting and when they are correctly installed they are almost indestructible. We aim to retain this reputation in future.

ROSTA has a **global sales network**. Over 55% of our products are sold either directly or through our four branches. In future I intend to encourage the further expansion of our sales network – there are still a few white spots on the world map. ROSTA rubber suspension technology should be available everywhere.

ROSTA technology – here I propose to set a fresh emphasis. Our previous marketing approach was based mainly on acquiring potential by disseminating new application ideas, and this approach paid off. However in future we also wish to tackle more **technically complex** challenges. This is why I attach so much importance to **research and development**; in future we want to produce more data and more measurement results about our rubber suspension technology. This is an essential condition for the creation of technically demanding applications.

Difficulties arise in all companies – the relatively high exchange rate for the Swiss franc, the high cost of creating added value in Europe, the steady increase in the price of natural rubber, declines in quality, etc., etc. I intend to tackle these challenges by the further automation of our production, including manufacture overseas, in joining a purchasing pool and by systematically monitoring quality.

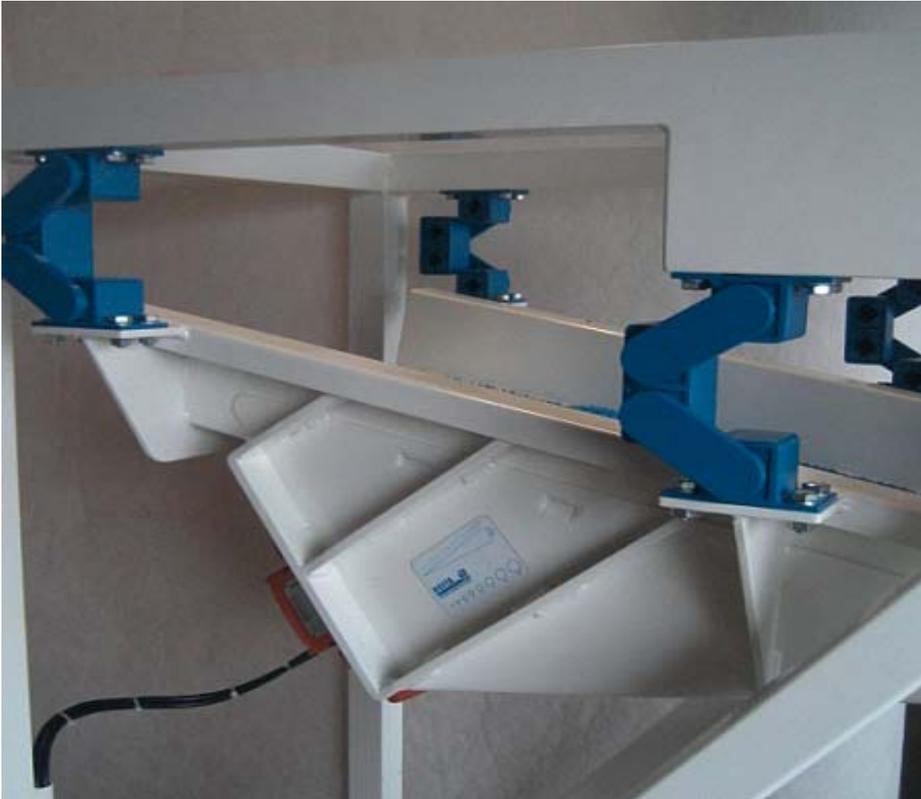
I am looking forward to tackling these challenges with great pleasure in our established company.

Marc Mollenkopf interviewed by Peter Schmid, dated April 2, 2012.



FEM-analysis of the ROSTA rubber suspension in idle mode

A HS (hanger mount for screens) by ROSTA is not just an ordin



ROSTA Demo Model with hanging discharge chute

ROSTA AG launched its new bearing components Type HS for hanging screens and discharge chutes in time to present them at BAUMA 2010. This newly designed swinging element makes possible **direct, hanging** installation of chutes and screens without the complicated yoke-constructions required to support these swinging machines on coil springs. All in all, this is a money-saving simplification of the installation of discharge chutes and of hanging screens.

In the first hours of the exhibition, specialists from various screen manufacturers made a beeline for our exhibition stand and pointed out that a CE certification is needed for "overhead suspensions" and "steel supporting structures." This is prescribed by Norm DIN EN 13001 and is binding.

For many years now we have installed discharge chutes under silos using AB 50 oscillating mounts in Australia and South Africa (see illustration below). In such cases the strict rule applied: **"Nobody is to stand under hanging processing machines!"**

As we have hardly been able to sell HS in Europe, we have now looked closely at the legal guidelines. The ROSTA oscillating element Type HS is definitely neither a **suspension device** nor a **steel supporting structure**. However, there are clear regulations about how such suspension mounts must be designed, tested and used.

The first requirement is the static and dynamic testing of the component by a **certified testing body**. We have chosen the **Eidgenössische Materialprüfanstalt EMPA (Federal Materials Testing Institute)** in Zurich for the testing of our HS. The first element to go on the test bench was our HS 50 for the **dynamic test** = tensile load 8,400 N, oscillation stroke 22 mm, frequency 720 min⁻¹, load changes



Discharge chutes on coal silos in New South Wales, hanging on AB 50 mounts

ary overhead suspension!

2,000,000. Of course the HS passed the 46-hour test phase unscathed and the rubber inserts reached a maximum temperature of only about 60 °C during the test run. It should also be mentioned that **3 pcs. HS 50 items** were dynamically tested, having been randomly selected from the series production so that we had a cross-sectional comparison.

In the static test there was far greater pressure on the oscillating element! **6 mountings** were subjected to the following test criteria: Tensile stress 80 kN (= almost 10 times overload – **Requirement = 4 times overload**). Here they wanted to test the bearings to destruction, but when 10 times overload was reached the test was stopped. The oscillating element did not break but the nodular cast arm of the HS was slightly bent once traction force of about 60 kN was reached.

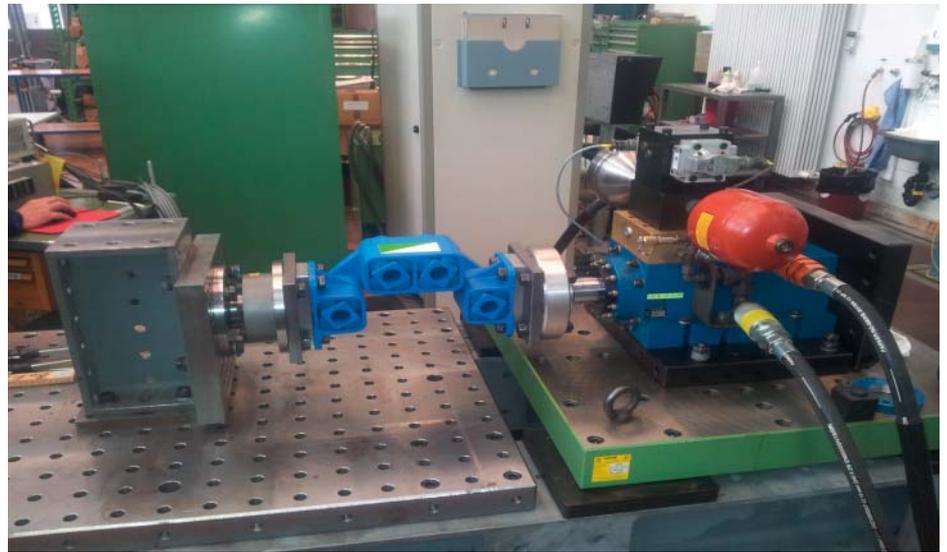
Further procedure:

All HS dimensions need to be tested in order for us to obtain **CE certification** for these elements (= declaration of conformity to standards). For the time being we will do this only for the HS 50 sizes, for which market demand is greatest.

We also need to produce detailed instructions for the following:



Test unit HS 50 after 10 times overload = slight deformation of the arms



Testing device for swinging (dynamic) stress at EMPA

Use and installation instructions

with information about the quality of screws and the correct tightening torque. These instructions should also contain information about the required **security aspects** when installing hanging devices (correct safety procedure).

We will shortly be in the position to provide the CE conformity declaration for the HS 50, but this does not dispense the operator of the plant from the need **to strictly prohibit persons from standing under hanging processing machines.**

In the event of **heavy** demand for smaller HS mounts (HS 27, 38 or 45), we reserve the right to carry out the same tests with **EMPA** for these elements – but this is very cost intensive procedure!



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Material Science & Technology

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Kurzbericht Nr. 459'742

Prüfauftrag: Statische und Schwingversuche

Prüfobjekt: Schwingelement HS 50

Kundenreferenz: Hr. G. Vucinic

Br. Auftrag vom: 21.12.2011

Eingang des Prüfobjektes: 25.01.2012

Ausführung der Prüfung: 01.02.2012 - 08.02.2012

Anzahl Schichten: 10

Beilagen: Keine

Versand: 3 Exemplare an Auftraggeber

Abschließung: Ohne Gegenbericht werden Prüfprotokolle nach drei Monaten entzogen!

Zusammenfassung

Sechs HS 50 Schwingelemente wurden statisch von 0 kN bis auf 80 kN mit einer Zuggeschwindigkeit von 10 mm/Min belastet und die zugehörigen Kraft-Weg-Diagramme aufgezeichnet. Anschließend wurden 3 HS 50 Schwingelemente Schwingversuchen mit einer mittleren Zuglast von 8 kN, einer Schwingamplitude von 11 mm und einer Schwingfrequenz von 12 Hz für 4 Mio. Zyklen unterworfen. Alle drei Proben haben die Schwingbelastung ohne sichtbaren Schaden überlebt. Die zugehörigen Kraft-Weg-Diagramme wie auch der Temperatur-Zeitverlauf eines Dampfschwingversuchs wurden während den Schwingversuchen aufgezeichnet.

Der statische Belastungsversuch ist nicht Bestandteil des Geltungsbereiches der Akkreditierung. Alle Prüfstärken unterliegen jedoch unabhängig davon dem EMPA-Qualitätsmanagementsystem.

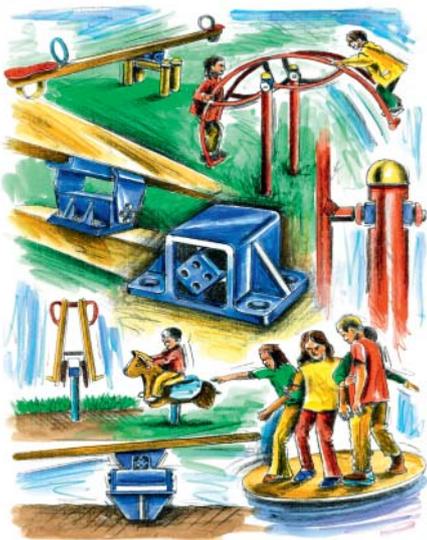
Dübendorf, 09. Februar 2012

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Abkürzung: Das Informationsmanagement System für Anlagen für die öffentliche Energie- und Wasserwirtschaft der Schweiz. Dieses System darf ohne schriftliche Genehmigung der Geschäftsleitung der EMPA nicht weitergegeben, kopiert oder verändert werden. © 2012 EMPA

Children's playgrounds were the model – Exercise-Parks for adults are increasingly popular and are the future – for ROSTA too!



We have **never** turned our noses up at low tech applications such as children's see-saw suspensions and riding horse supports as areas of application for our rubber spring devices. And we were right, because today this niche market represents about 5% of our total business!

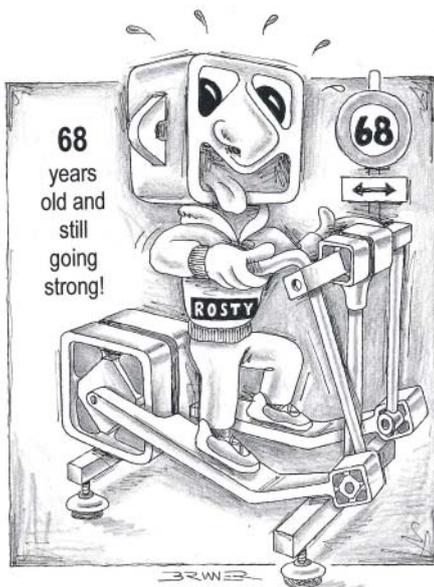
The ROSTA rubber suspension element has simply revolutionised all bearings, pivot points and elastic supports on these **"children's exercise elements"** because it is simple, maintenance-free and gives passive protection from injuries. Thousands of coil spring inlays that are liable to break and cause injuries have now been replaced by the com-

Ask for our detailed documentation on applications in playgrounds. You will be impressed by the existing applications and the outstanding customer benefits.



compact ROSTA rubber suspension element with its triple function "spring device, shock-absorber and support bearing".

Represented by:



Today's leisure offer in large conurbations increasingly includes outdoor exercise areas for adults, with **weather-proof, maintenance-free** fitness equipment that can even stand up to possible (nocturnal) **vandalism**. The many running machines, rowing trainers and press-up benches in these public parks reflect a need for movement among our largely sedentary populations and are likely to shoot up like mushrooms in the next few years.

The compact, wear-free ROSTA rubber suspension is the ideal **"power pack bearing"** for all stored joint and spring load mechanisms in this equipment and will revolutionise the technology of these park training devices.

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