

ABB Review 1/2006

Contemporary manufacturing challenges

Manufacturing trends

6

The science of manufacturing

New philosophies and buzzwords are meaningless unless managers know and understand the fundamental relationships that govern manufacturing processes – in other words, the science of manufacturing.

12

The manufacturing beat

Material and work flow through a factory with a definable “beat”. If ABB has many factories with many different beats, how does it manage and optimize them all?

16

Fasten your seatbelts

What do driving a car along a country road and optimizing Supply Chains have in common?

19

No risky business

The handling of risk can make or break any project. Global Supply Chains – with their complex interdependencies – demand solid assessment of the risks involved.

Demand driven manufacturing

23

Successful navigation of uncharted territory

What a moving bottleneck has to do with transformer manufacturing, and how the solution lies in transforming the problem.

28

Shortest road to China

It’s all about speed! So how did ABB cut the Supply Chain time by a whopping 70 percent between Germany and China?

30

Driving force

How can the demand for the fast delivery of ABB’s component drives be harmonized with the need to keep logistics and production costs low?

33

The Express Line

A radical rethink of manufacturing processes is helping ABB meet ever-tighter deadlines.

36

Breaker factory of the future

ABB’s high-voltage breaker facility in Mt. Pleasant, Pennsylvania has taken breaker manufacturing to a new level.

39

Smart manufacturing

ABB’s Full Service® contract helps NOKIA use maintenance as a tool to improved productivity and not just as a tool for fire-fighting and preventive repairs.

43

More colors, less waste

A paint robot brushes aside waste and will paint your car whatever color you want.

47

Spot on

Equalizing software that permits a welding robot to hit the right spot every time.



Manufacturing technology

52

Operational Excellence

What does Operational Excellence mean? And how can it take the pain out of getting the job done?

55

Simplicity pays

A simple but effective engineering philosophy has been helping ABB meet tough customer demands at a reasonable price.

59

NEMESIS

A powerful data-gathering and analysis tool that delivers harmony to manufacturing.

65

Simulating success

Process simulation is an important and integral tool in many businesses. It is used extensively throughout ABB and as this article shows, it is an excellent tool for enhancing lean manufacturing.

68

Watchful eye

New ABB concepts enable clear and efficient exploitation of diagnostic information. For customers, this means better instrument and plant performance.

