

**SMS
SIEMAG**

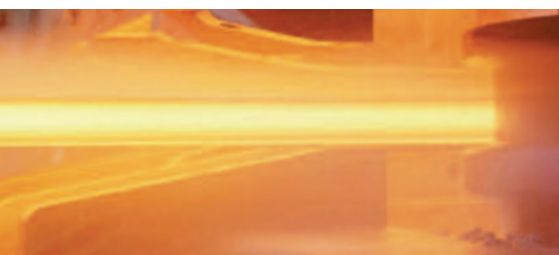
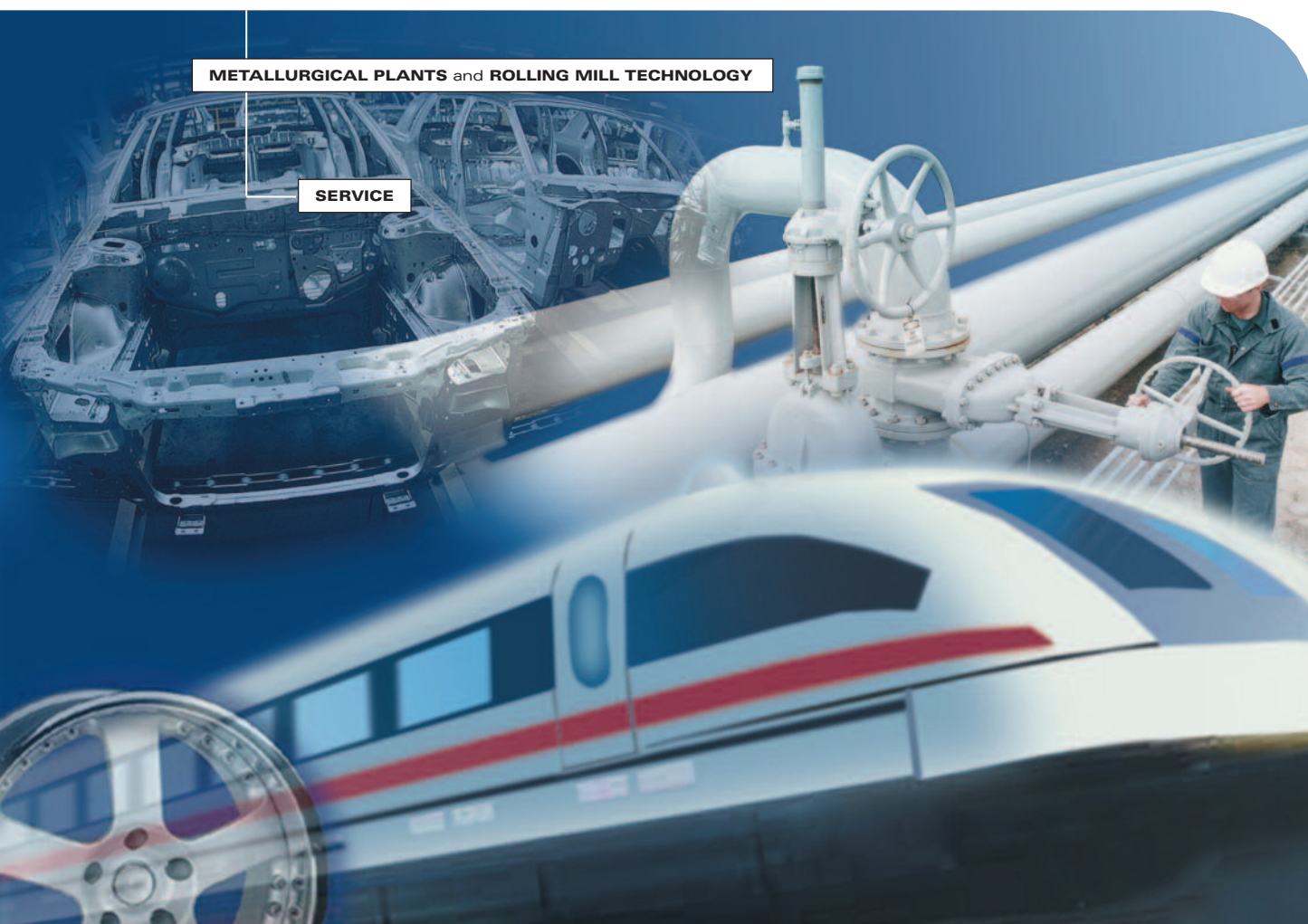
SMS group



NEW STEEL GRADES PACKAGE for CSP[®] PLANTS

METALLURGICAL PLANTS and ROLLING MILL TECHNOLOGY

SERVICE



NEW STEEL GRADES PACKAGE for CSP® PLANTS

UPGRADED TECHNOLOGY – IN LINE WITH GROWING DEMANDS

You see it all the time: today's market for hot-rolled strip calls for constant improvements in both products and technologies. Interestingly, since the launch of CSP technology in 1989, there has been an increase in newly installed CSP capacity to over 40 million t/a – i.e. more than the production volume of new, high-performance hot rolling mills. This just goes to show what you can do with a process that offers you perfect conditions for efficiently producing new steel grades. All you need to do is extend your production capacity.

IT'S YOUR CHOICE – PRODUCT MIX OF CSP® PLANTS

You can produce a wide range of steel grades on CSP plants. But, what's crucial here, due to ever-increasing demands on rolled products, is technological know-how over the whole production line – from steelmaking to rolling:

- Mild carbon steel for cold forming and rerolling
- Structural steel and HSLA
- Weather resisting steel
- Line pipe steel, heat treatable steel
- Spring steel, tool steel
- Wear resisting steel
- Electrical steel (Si-alloyed)
- Stainless steel
- Multiphase steel / dual phase steel
- Peritectic steel grades

A BRAND-NEW STEEL PACKAGE FOR YOU

This only became feasible as a result of steady progress in technology with a focus on helping you realize the untapped potential still available. Now SMS Siemag has developed a 'New Steel Grades Package' so you can produce advanced steel grades. It also ensures you achieve much more safety, durability and flexibility of conventional products because CSP technology is climbing to exciting new levels. Just imagine what this means for CSP customers like you: You can enter the high-end areas of challenging qualities in the automotive, transportation and energy industries – plus enjoy a rapid return-on-investment.

MULTIPHASE STEEL GRADES

The production of multiphase steels is becoming increasingly important for high-load parts in passenger and commercial vehicle construction. You know these applied steels must meet complex requirements in terms of formability and part properties. So, depending on the part, the crucial design criteria for car body components may be elastic buckling strength, plastic buckling strength or energy absorption.

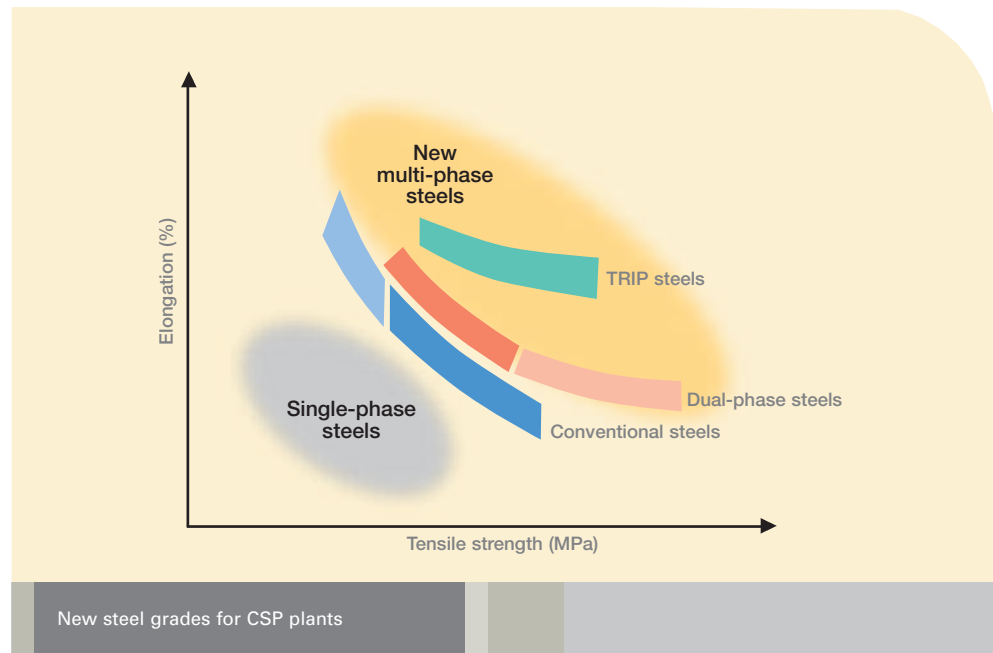
Invaluable for you here is that multiphase steels combine high strength with good plastic behaviour (see chart). That's how they save a great deal of weight when used in automobile construction – which in turn reduces fuel consumption. Even more, they increase the energy absorption of the car body during accidents, resulting in some 50% more safety compared to cars built with conventional steel grades. You won't find another material that can top these advantages.



Si-steel application

Multi-phase steel application





NON-ORIENTED HIGH-STEEL GRADES

CSP material with ideal geometrical and electromagnetic properties is ideal for:

- motor laminations
- power generators
- linear drive systems,

e.g. the Transrapid superspeed maglev system. (The Shanghai Transrapid covers the 30 km distance between Pudong International Airport and Long Yang Rd. Station).

LINE PIPE STEEL GRADES

Line pipes are used offshore and onshore for transporting oil and gas. Here again you benefit from CSP because it not only uses low-energy processes, e.g. thin slab casting and rolling, but also saves expensive and scarce alloy resources. Included among the improved properties of CSP material are an excellent degree of isotropism, high yield strength and outstanding ductility combined with good weldability.



Pipe steel application

WHAT'S IN IT FOR YOU

SMS Siemag has developed specific process expertise in producing these new steel grades on CSP plants. Now you can profit from our know-how package designed to support your expansion into these booming market segments. There are even better prospects for you because CSP technology, with its process superiority and huge potential, is set for further dynamic expansion on the market. Take advantage of this opportunity if you want to ensure your plant achieves impressive performance throughout its operating life. It is worth your while taking the plunge – on the basis of this framework:

LICENSE AGREEMENT FOR PRODUCING NEW STEEL GRADES, COMPRISING:

- Technical assistance and consulting
- Offline and online training
- Know-how transfer
- Installation of relevant parameters in your existing automation system
- Cooperation projects based on profit-sharing
- Support in marketing strategies.

Added to this is our longstanding experience – covering everything from ironmaking to finished strip. Let us transfer our knowledge to your plant and help you gain a competitive edge.

YOU CAN EXPECT

- a better market position,
- an increased market share,
- rapid implementation and return-on-investment.



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MEETING your **EXPECTATIONS**