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Innovations in the steel industry. The focus of its steel research lies in the fields of mobility, energy and sustainability. In 2012 the innovation budget for the 1,000 strongest research companies rose 5.8 per cent to a total of EUR 466 billion, according to a study published by management consultants Booz & Company.

Third-generation advanced high-strength steel emerges

Ultra high strength steels have been developed for lightweight construction, especially for the structural members of mobile equipment in order to reduce weight and fabrication costs as well as increase performance. Such steels are conventionally manufactured from hot rolled plate by reheating, quenching and tempering.

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From shipping containers to skyscrapers to turbines, good old steel is still the workhorse of our modern world. Now, scientists are discovering new secrets to make the material better, lighter ...

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The Future Revolution in Automotive High Strength Steel Usage

TimkenSteel Corporation - TimkenSteel's Endurance Steels ...

Ultra High Strength Steels • Martensite (~ 900-1500 MPa tensile strength) – Fully martensitic structure – High tensile and yield strength – Single phase structure – Can exhibit excellent weldability in lower strengths – Low ductility – Best suited for roll forming The Types of High Strength Steels The Hot Forming process allows for the formation of shapes that cannot be cold stamped with Ultra High Strength steels. The unique properties of this material combine both complexity and strength – and components made with press-hardened steel can accomplish in one piece what would usually require heavier, thicker parts that are welded together.

Innovation | Tata Steel in Europe

New Corrosion-Resistant, Ultra-High-Strength Steel

Automotive weight reduction: Ultrahigh-strength steels and ...

ULTRA-STEELS: INNOVATION OF STEEL STRUCTURES BY MATERIALS ...

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Scientists Invent a New Steel as ... - Popular Mechanics

New Corrosion-Resistant, Ultra-High-Strength Steel The selection of alloys used for demanding applications has often required a compromise between strength and corrosion resistance. Ultra-high-strength steels such as 4340, 300M and AerMet® 100 provide limited corrosion resistance while stainless steels such as 17-4PH and 15-5PH provide greater

TimkenSteel Corp a leader in customized alloy steel products and services, has earned the prestigious American Metal Market Award for Steel Excellence in the "Best Innovation – Product" category...

Tata Steel Europe is also working with other steelmakers in Europe on major research and development project, ULCOS (ultra-low CO2 steelmaking), to develop breakthrough technologies which can reduce CO2 emissions per tonne of steel produced by at least 50%.

MARTENSITIC STAINLESS STEEL

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Mechanical and technological properties of ultra high ...

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Ultra-Clean steels in transmission components | Vinnova

Ultrahigh-strength steels for aerospace applications ...

Hot forming steels are currently the fastest growing materials group in the auto industry. The InCar plus project showed that these steels can reduce part weight by 20 to 30 percent. Steel composites are another current development.

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ULTRA-STEELS: INNOVATION OF STEEL STRUCTURES BY MATERIALS EVOLUTION Kotobu Nagai – NIMS, Tsukuba, Japan ABSTRACT To save natural resources and energy and conserve our planet healthy as well as to improve the quality-of-life, we need both breakthrough materials and new technologies to put the breakthrough materials together into a product or a steel structure. The Ultra-Steel project in NIMS/Japan has

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Ultra-Clean steels in transmission components | Vinnova

ULC (Ultra Low Carbon) steel is widely used for various applications where good formability and surface quality are required. Ultra-low carbon (ULC) Interstitial Free (IF) steels have been used as automobile panels since the latter half of the 1980s.

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The ultrahigh-strength steels used in aerospace applications are primarily alloys developed 25 or more years ago, which would seem to illustrate the conservatism of alloy producers. However, the now widespread use of AF1410, which was developed in the mid-1970s, suggests that new alloys will be adopted for aerospace applications if their mechanical properties are markedly superior to incumbent alloys.

Ultrahigh-strength steels for aerospace applications ...

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