

20 – 23 APRIL / DÜSSELDORF / GERMANY



THE ULTIMATE
WORLD OF
CUTTING AND WELDING

2027

URBAN STEEL EXPO

Technical paper – Deep Dive

Cold cut, correctly heated

A boom in the defence industry: What does this mean for the welding and cutting sector?

Global defence spending went up to some USD 2.7 trillion in 2024 – an increase of ten percent on the previous year, as evidenced by the latest report of the Stockholm Peace Research Institute (SIPRI). This development is mainly driven by a rise in defence budgets across Europe. European steel manufacturers have been responding to the rapid growth in demand for armoured vehicles, guns and fighter jets. In recent months, they have had a variety of new steel grades certified for the defence industry and launched them onto market. What does this mean for processing these steels, especially in the welding and cutting sector? In an interview with the editors of the Urban Steel Expo, Marc Rixecker – Senior Manager Marketing at Dillinger Saarstahl/SHS - Stahl-Holding Saar – explains some important points.

USE: What are the considerations to take into account when welding and cutting armour steels?

MR: In principle, our DIFENDER grades involve alloyed tempered steels that are easy to work in cutting, welding, bending or mechanical processing. However, some knowledge of processing should be a prerequisite. When cutting, pay particular attention to the correct preheating/reheating procedures. Depending on the individual grade, and in case of harder and higher alloys, the cutting process should be as "cold" as possible, for example using water jet systems, in order to keep heat input as low as possible. Staff processing these steels should also have the appropriate knowledge or should undergo appropriate training.



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St.Nr. 105/5830/0663

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USE: What skills are required in welders and cutting machine operators?

MR: As operators, they should have as much experience as possible. Depending on their area of responsibility and the requirements for each type of welded part, they must also be trained separately and pass a professional examination in accordance with DIN2303, e. g. Q3. This standard must be met by companies working with armour materials.

USE: How and where can you train for processing the steels in question?

MR: The defining standard here is DIN2303. You must also consult with the WiWeb (Military Science Institute for Materials and Supplies) and the WTD (Military Technical Service) of the Bundeswehr. You can then undergo a qualification process. There are companies specialising in the training of welders in accordance with Q3. Relevant employees can be trained here.

USE: Which welding and cutting methods are used predominantly?

MR: Depending on the grade and thickness of the DIFENDER sheet metal, plasma, laser or water jet cutting methods can be used for cutting. When welding, it is usually the MAG welding process which is used, which is widely employed for high-alloy steels.

USE: In which areas is the demand for safety and armour steel seeing particular growth?

MR: The increasing demand for our DIFENDER grades ranges from the civilian to the military sector: from secure limousines to armoured vans and military vehicles.

USE: Is there one basic tip you would like to pass on to armour steel processors?



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MR: It is best to consult with the steel/sheet metal producer in advance, to take the appropriate processing instructions into account and to use trained staff.

USE: Thank you for talking to us!

New welding and cutting trade fair format

What other trends are there to change the world of welding and cutting? The Urban Steel Expo 2027 will answer this question. The Ultimate World of Cutting and Welding – Urban Steel Expo (or USE for short) is the new hotspot for welding and cutting specialists. This new trade fair format will celebrate its first edition at the Messe Düsseldorf exhibition centre from 20th to 23rd April 2027. Information: <https://www.use-expo.de/>

The Ultimate World of Cutting and Welding – Urban Steel Expo

With The Ultimate World of Cutting and Welding – Urban Steel Expo (or USE for short), Messe Düsseldorf has developed a new concept tailored specifically to the needs of the welding and cutting industry. This innovative platform combines technology and business with event culture, making for a fresh kind of exchange and networking platform. USE will be celebrating its premiere from 20th to 23rd April 2027, with the Düsseldorf Exhibition Centre transforming into an international hub for companies specialising in cutting and joining technologies, along with related processes and technologies, every four years thereafter. With USE 2027, the traditional trade fair format is being redefined, with technology, business, creativity, and community merging into a single industry event. This new platform will bring together global market and innovation leaders and showcase pioneering technologies.

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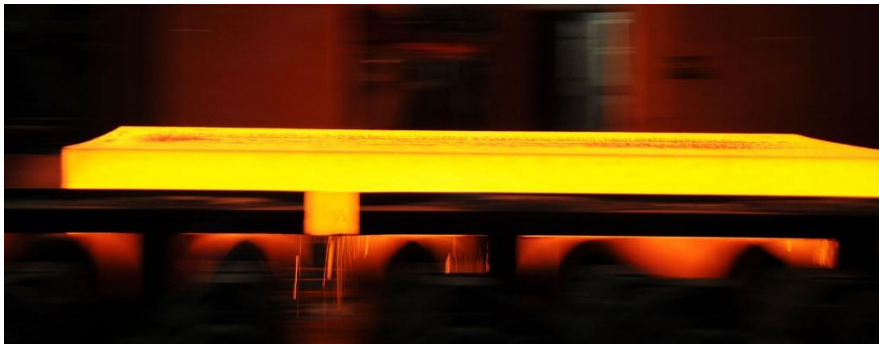
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Image captions



Marc Rixecker, Senior Manager Marketing at Dillinger Saarstahl SHS - Stahl-Holding Saar. Copyright: Dillinger



Dillinger produces DIFENDER sheet metal from alloy tempered steels. Copyright: Dillinger



The demand for armour steels to be used in military vehicles is seeing rapid increases. Copyright: Pixabay

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Frank Wöbbeking is Managing Director of the mediamixx and document1 communications agencies. A trained newspaper editor, he has been working in journalism and communications for 40 years, for the past 20 of which, he has been specialising in industrial topics with a focus on steel and stainless steel.

Michael Vehreschild trained as a newspaper editor and has been with mediamixx since 2008. His areas of expertise include industrial fittings, piping and casting topics.

Together, the two authors explore the latest developments for USE and talk to users, manufacturers and researchers.



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Upon publication, we look forward to receiving a specimen copy and/or a mention of our website link: <https://www.use-expo.com>

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