



# RAILWAY EQUIPMENT

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Rail and track construction industries  
rely on **capilla**.

## THE PROBLEM

Abrasion, impact by rails and railway switches, as well as earthmoving equipment slowly but surely reduce the product quality, increase maintenance costs, raise energy costs and lead to a declining efficiency.

Therefore, the risk of downtimes and ultimately danger for railway traffic increase dramatically.

As a consequence, operating costs rise to incalculable amounts.

## THE SOLUTION

**capilla**-products reduce railway downtimes, increase product quality, and thus raise productivity and safety noticeably.

All **capilla**-products were created with more than 50 years of experience in forging, the most demanding welding application.

## TYPICAL APPLICATIONS

Rails, switches, impellers, joint welding of rails, excavator parts, earthmoving equipment, conveyors, drive units.

Demanding welders all over the world put their trust in the **capilla**-quality: in maintenance, repairs and production.

**capilla** always delivers the most suitable product.

**capilla** - The number 1 for all demanding metal-workers.

Below you can find a brief extract of the stick-electrode range manufactured by **capilla**, which are specifically used in Railway Engineering. A number of other products, as well as solutions for other welding processes can alternatively be provided by **capilla**.

	Product Description	Applications	Analysis [weight-%]	
<b>51 KBN</b>  AWS A 5.4: ~E 307-15	Basic coated electrode for fusion welding of dissimilar steels and for cladding. The weld metal consists of austenitic chrome-nickel-manganese steel for service temperatures of up to 300 °C. Thin coated stick electrode especially suitable for repair welding of rails.	Welding of dissimilar joints, fusion welding of high carbon steels and work hardening manganese steels e.g. X 120 Mn 12 (1.3401). Fusion welding of “hard to weld” steels. Buffer layers for hardfacing.	C Cr Ni Mn Fe	max. 0,1 17,0-19,0 7,0-9,0 5,0-7,0 Rest
<b>56 FE</b>  AWS: E Fe Mn-A	Basic-coated high recovery stick electrode. The strain hardening weld metal is highly Mn-alloyed. Suitable for welding of very tough and wear resistant overlays exposed to heavy impact welding should be performed applying low heat input.	For overlay welding of worn manganese steel surfaces and parts which are largely exposed wear caused by impact and shock: Excavator teeth, beating arm, dredger bolts, crusher jaws and cones, sand blasting and shot peening devices. Railway systems: crossing frogs and four-way pieces.	C Mn Fe	max. 0,8 12,0-14,0 Rest
<b>CRMA 47</b>  EN 14700: E 7-UM-250-K	Basic-coated high recovery stick electrode. The strain hardening weld metal is highly Mn-alloyed. Suitable for welding of very tough and wear resistant overlays exposed to heavy impact. Welding should be performed applying low heat input. The weld metal is corrosion resistant.	For overlay welding of worn manganese steel surfaces and parts which are largely exposed to wear caused by impact and shock: Excavator teeth, beating arm, dredger bolts, crusher jaws and cones, sand blasting and shot peening devices. Railway systems: crossing frogs and four-way pieces	C Cr Mn Fe	0,5-0,6 13,0-15,0 16,0-18,0 Rest

Experts trust **capilla**.



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