MULTIRAIL® HotMetalWeight

- **Fully automatic weighing of torpedo cars in motion**
- **Precise determination of hot metal output for blast furnace operations**
- **Additional benefit for steel plant process control and car maintenance**
- **Pitless and gap-free design**
- **Wagon number identification**
- **No operator required**
- **Optional: legal-for-trade execution for conventional railway cars**

Application

MULTIRAIL® HotMetalWeight is a state-of-the-art dynamic weighing system for torpedo cars on their way from the blast furnace to the steel plant. High-precision sensors below the continuous rail determine in motion the weights of both the loaded and unloaded wagons. At the same time an identification system records and processes the wagon numbers. The entire solution works automatically without an operator. For calibration the static function of the scale is used, eliminating the need for a separate reference scale provided by the customer.

Equipment

Specifically developed for MULTIRAIL, the concrete weighing sleepers are equipped with high precision strain-gauge sensors. They reliably transmit all forces and moments applied in the track to the ground and simultaneously measure the axle loads with a high degree of accuracy and repeatability. The MULTIRAIL weighing system is installed without a foundation and a rail gap simply by positioning the weighing sleepers inside a prepared ballast bed and welding the rails continuously afterwards.

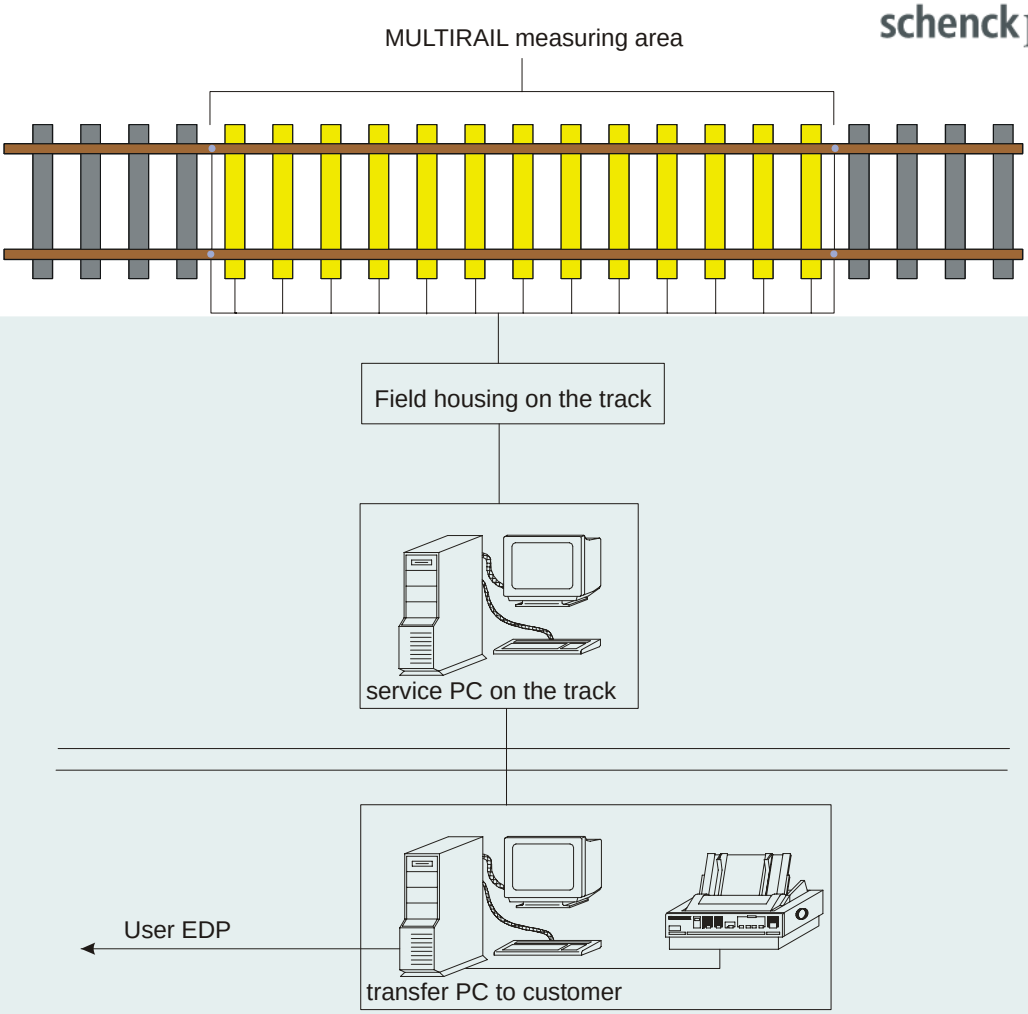
This innovative weighing system can be installed without additional effort for the works in the track during a normal railway maintenance period.

The data processing is realised based on the Schenck Process Software DISOWARE Terra.

Function

MULTIRAIL offers the following benefits to the customer:

- determination of the hot metal production masses by shift, daily and monthly totals as a basis for the blast furnace performance records
- notification of the actual weight of each hot metal delivery to the steel plant, allowing optimisation of the converter control
- car refractory maintenance optimisation, achieved by systematically monitoring the empty and loaded car weight variation over time
- print out of a weighing protocol
- data transfer to the customer's EDP in the BF control room



Technical specification for the MULTIRAIL® HotMetalWeight railway scale

Measurement principle:	dynamic half-side bogie weighing
Rail profile, track gauge and tie spacing:	identical to the connecting railway
Installation length requirements:	approx. 5-10 m measuring length (depending on car type) approx. 100-150 m weighing area (dep. on train composition)
Weighing range of the torpedo car:	5…800 t
Dynamic weighing accuracy:	up to ± 0,5 % of the final value of the weighing range
Nominal weighing speed range:	4 – 8 km/h
Maximum transit speed:	up to 25 km/h
Operating temperature range:	scale mechanics: -40°C to +70°C
Subsoil load capacity:	deformation module: 90 MN/m²

Our **VIDEO** "MULTIRAIL® HotMetalWeight" presents and explains convincingly the functions of this innovative weighing system. Please send us a request using the e-mail address below for a copy of the **CD** free of charge.

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