



## Schenck Process Weighing Systems for teeming and ladle transfer cranes:

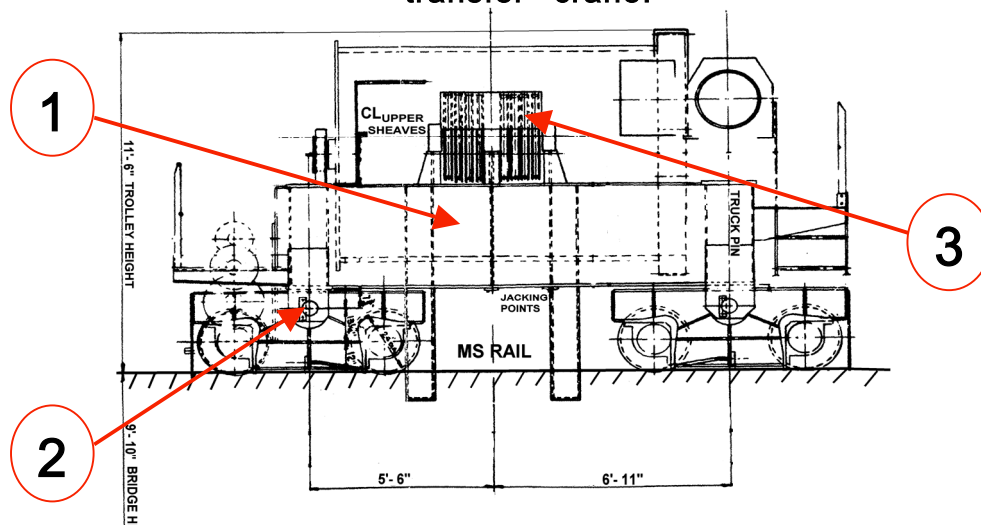
### Installation solutions inside the crane trolley

The heavy cranes carrying ladles filled with pig iron or liquid steel represent the most important transport device in every steel plant. As these cranes transfer the ladles to different locations of the steel making process, the installation of an weighing system inside leads to essential benefit for the entire mass totalling and production data acquisition and control.

In this NEWS we like to present to You the different principal installation places for crane weighing solutions **inside the crane trolley**. Integrating scales there is characterised by the following advantages, compared to the second principally suited location for crane weighing systems, the spreader beam scales:

- no problems with the fixed mounted cable passages
- reduced dynamic load and temperature charges

In order to define the different installation places for our Weighing Systems please have a look below at the typical drawing of the trolley of a heavy load teeming or ladle transfer crane:



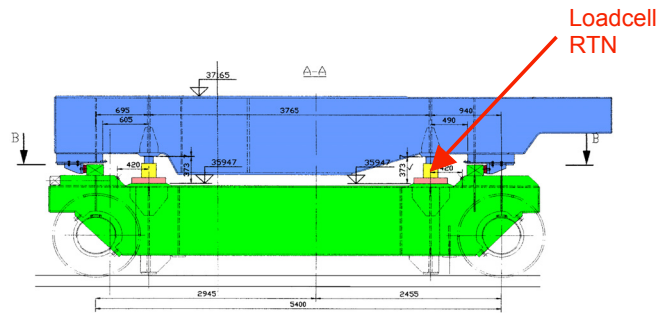
At the next page we will present to You the following installation locations for weighing systems and their different features based on the drawings of executed systems:

- 1 Double frame weighing
- 2 Wheel base platform weighing
- 3 Upper sheave block weighing

**These three different locations are characterised by the following different features:**

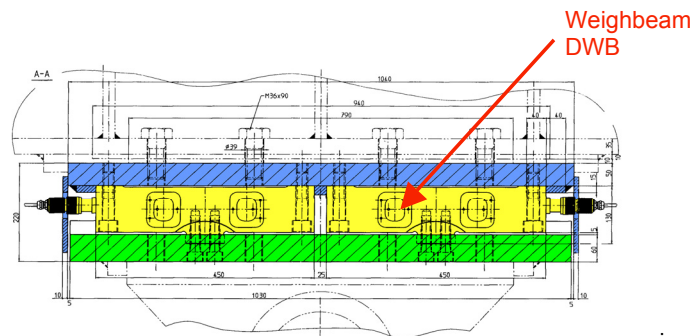
## 1 Double frame weighing:

- **Accuracy:** better than  $\pm 0,1\%$  F.S.
- optimal mechanical arrangement for new designed and manufactured cranes
- Problem in case of revamping of existing cranes:
  - vertical installation space required for the additional weighing frame
  - modification effort regarding material and time
- installation of standard Loadcells RTN



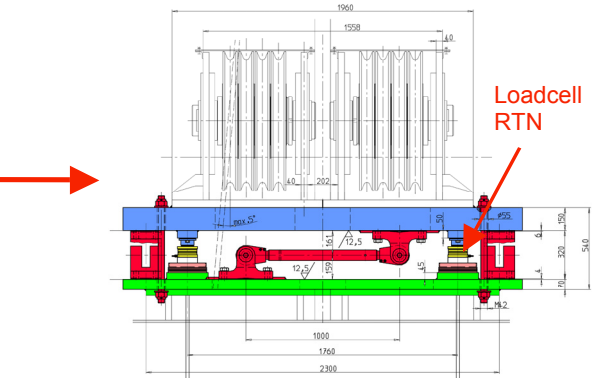
## 2 Wheel base platform weighing:

- **Accuracy:** up to  $\pm 0,1\%$  F.S.
- optimal solution for the revamping of existing cranes:
- additional installation space only 200-300 mm
- transmission of all dynamic forces related to the crane operation by Weighbeams DWB mounted fixed between the trolley frame and the wheel base



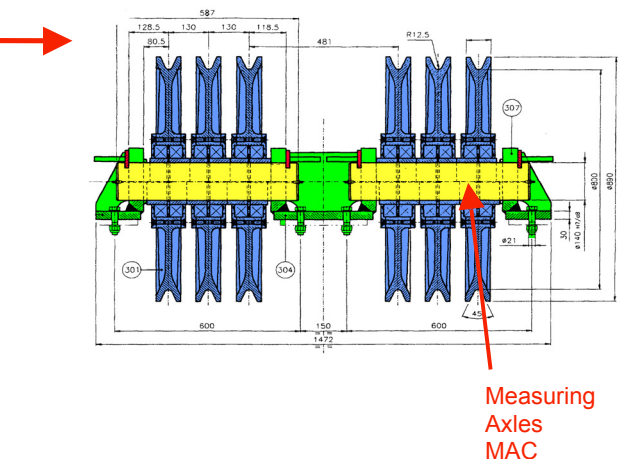
## 3 Upper sheave block weighing for the main hoist:

- **Accuracy:** up to  $\pm 0,2\%$  F.S.
- optimal solution for revamping due to the minimised mechanical modification effort by supporting the compact upper pulley sheave block onto standard Load Cells RTN



## 4 Upper sheave block weighing for the auxiliary hoist:

- **Accuracy:** up to  $\pm 1-2\%$  F.S.
- very simple solution for example by using Measuring Axles MAC inside the upper sheave block of the auxiliary hoist of teeming cranes
- usually for the control of the teeming process the accuracy of this system is sufficient



This short overview should indicate, that besides the classical double frame Schenck Process has long years of experience with different weighing solutions suited for modernisation of existing cranes as well. These special weighing solutions are optimised to meet the plant requirements of maximum weighing reliability and minimum modification time availability. We would be glad to check the cranes in Your plant in order to find to the most reliable and economical weighing solution for an improved future production mass management and control.

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