



Hot Boxes, Weighbridges and RFID

Of course using RFID is useful to know where wagons are and regarding train composition management.

Regarding Hot Boxes, Weighbridges and RFID,

Hot Boxes

RFID does not detect hot boxes alone.

Hot box is the first step of destruction of axle's ball bearings : it becomes hot, before melting, next step being wagon's derailing at speed !

You have a standard hot box detector and just nearby a RFID reader detecting the wagon's identity: when a hot box is detected, the reference number of the wagon is send to central IT system, who then knows that at such place, a hot box has been detected on wagon NO xxxx :

In the today's process without RFID, train being stopped, a search of the defective wagon has to be made: with RFID, even before the train is stopped you can already know if, at the nearby workshop, repair team and right parts to repair the wagon are available!

This can be done using hot box detectors already in place.

Weighbridges

it is possible not only to place RFID readers near hot box detectors.

It may be useful to place an axle weighbridge at all main railways stations, may be two, one at entry, one at way-out, all with a RFID reader very close.

So you know the weight of all wagons leaving a station.

If the customer loaded a more than announced load, this is automatically detected in the computer, a complementary invoice can be emitted, and you have time to invite customer at destination's station around the local weighbridge to check weight together!

And it also allows to control that there are no overloaded wagons in face of the maximum allowed axle load, a very important rule in all railways.

You also detect if wagons are correctly loaded, this meaning load correctly distributed in the wagons:

For instance it is possible to detect a 80 tonnes bogie wagon, with 20 tonnes per axle limit, loaded for instance 18, 19, 22, 21 tonnes : If they are four such trains per day with 20 unequally loaded wagons, track and bridges suffer badly : you may not know it as loading bills are correct.