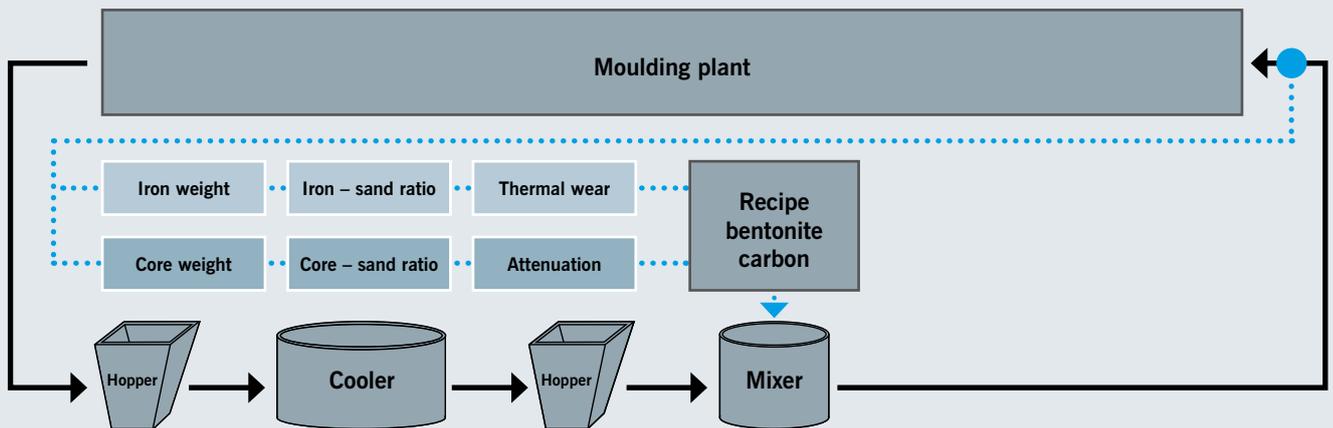


Preventive menu-driven control

Form_Reg



The task:

Sand qualities are markedly changed after every cycle due to the thermal wear, inflow of core sand and extraction. These changes are influenced to a large extent by the casting program. Preventive menu-driven control has to compensate these effects.

Approach:

Advance casting planning allows forward-looking calculation of requirements on the basis of mould material balancing. The recipe approach is determined for bentonite and auxiliary materials via wear values. The data of the cast quantity of iron and the mould material with its auxiliary materials are continuously applied to consumption acquisition in mould material balancing.

Solution:

The construction of a sand conditioning plant, including its dosing control system, is not modified. The recipes for weighing control are automatically applied via the interface of the Form_Reg computer. The **Form_Reg** computer manages a model file with all relevant casting data. The planning program applies these data in order to determine in advance the melting loss due to casting. This calculation is included in the specified recipe to condition the mould material on a preventive basis so that the losses can be compensated. The wear values taken as a basis occur by mould material balancing over the previous thirty working days, which are automatically updated on a continuous basis. This control system ensures homogenisation of the whole sand balance.

The **Form_Reg** program is thus adaptive and adjusts to the conditions present in any foundry. Depending on the degree of automation of the data sources, data can be exchanged automatically.

Advantages:

Recipe adjustment is reliable because it is performed automatically by a computer program. Manual intervention is possible but not necessary to avoid sources of error. Unmanned operation is therefore simple with frequently changing casting programs.

Continual adjustment via the recipe ensures homogenisation of the composition of the entire sand balance. Fluctuations are reduced appreciably.

Upgrading of existing sand conditioning plants with weighing techniques is possible.

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