

A method of defrosting out of iron-containing raw material in the railroad cars includes determination of the duration of warming-up of raw material, which occurs under the action of convective heat exchange. For reduction of the coolant flow rate required for warming-up of raw material, the duration of warming-up is determined depending on the index of the state of solidity of freezing raw material in accordance with the expression

$$t_p = \frac{a}{h_n} + b, \text{ year}$$

where  $t_p$  - duration of warming-up, year;

$h_n$  - solidity index of freezing raw material determined by the depth of penetration of dipstick into the raw material at control measurement, which is carried out during motion of railroad car, cm;

$a$  - coefficient, which characterizes the form of load and temperature conditions of warming-up, which makes 1.74 for iron-ore concentrate; for iron ore – 24.7;

$b$  - coefficient, which characterizes climatic conditions and which makes 1.75 in both cases.