

## TECHNOLOGY OF HIGH-STRENGTH RAILWAY WHEEL MANUFACTURE



### Areas of Application

Manufacture of steel wheels  
for rail transport

### Specification

The steel composition for railway wheel  
manufacture and modes of thermal hardening  
provide the following mechanical properties:

$\sigma_b$ , MPa	1170
$\delta$ , %	9.8
$\Psi$ , %	14.0
KCU, J/cm <sup>2</sup>	30
HB	336

### Advantages

The optimal composition of wheel steel  
and improved heat treatment of wheels ensure  
a hardness of  $\geq 320$ . The products  
manufactured using the technology surpass  
the well-known brands in plasticity  
and toughness: elongation by 41.5%,  
contraction by 68%, and impact strength  
of disc and tread by 70%

### Stage of Development. Suggestions for Commercialization

IRL8, TRL8

Terms of reference for railway wheel heat  
treatment and steel composition

### IPR Protection

IPR3

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