

Certificate of Certified Reference Material

NCS HS 11759a

Carbon Steel

Reissued in 2016

Approved by China National Analysis Center for Iron and Steel

(Beijing China)

Certified Values and Standard Deviation

(%)

No.		C	Si	Mn	P	S	Cr	Ni	Cu
NCS HS 11759a	Certified Value	0.127	0.219	0.481	0.017	0.024	0.0058	0.015	0.257
	Standard Deviation	0.003	0.003	0.006	0.001	0.001	0.0006	0.001	0.007

Note:

1. Each certified value is the mean of 6 analytical results of independent labs.
2. The sample is cylinder bar. The size of sample is $\Phi 37 \times 35$ mm.
3. The sample should be stored at dry place.

Analytical Methods

- C: Combustion- infrared absorption method
Combustion-gravimetric method
Combustion- iodimetric method
- Si: The perchloric acid dehydration-gravimetric method
Silicon-molybdenum blue photometric method with ferrous reduction
- Mn: Potassium periodate oxidation photometric method
ICP-AES
- P: Bismuth-phosphorus-molybdenum blue photometric method
Titrimetric method, separation as ammonium phosphomolybdate
The butyl acetate extraction phosphorus-molybdenum blue photometric method
- S: The aluminum oxide chromatographic separation-barium sulfate gravimetric method
Combustion-infrared absorption method
Combustion- iodimetric method
- Cr: The diphenyl carbazide photometric method after separation with sodium carbonate
Ammonium persulfate oxidation titrimetric method
- Ni: Dimethylglyoxime photometric method
ICP-AES
- Cu: Photometric method with bis-cyclohexanone oxalylbihydrazone
The neocuprone-trichloromethane extraction photometric method



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