QC

AUTOMOBILE INDUSTRY STANDARD

OF THE PEOPLE'S REPUBLIC OF CHINA

ICS 43.040.50

T 21

QC/T 1098-2018

Technical specification for powder metallurgy hub used in automotive clutch

汽车离合器用粉末冶金盘毂技术条件

Issued on: July 04, 2018 **Implemented on: January 01, 2019**

Issued by: Ministry of Industry and Information Technology of PRC

Annex:

Number, standard name, implementation date of 11 automotive industry standards

No.	Standard No.	Standard name	Replaced standard number	Date of implementation
101	QC/T 645-2018	Tow truck	QC/T 645-2005	2019-01-01
102	QC/T 1094-2018	General specification of lithium ion batteries for motorcycle starting		2019-01-01
103	QC/T 1095-2018	Performance requirements and bench test methods of motor vehicle assist vacuum pump		2019-01-01
104	QC/T 788-2018	Performance requirements and bench test methods of automobile pedal device	QC/T 788-2007	2019-01-01
105	QC/T 311-2018	Performance requirements and bench test methods of motor vehicle brake master cylinder	QC/T 311-2008	2019-01-01
106	QC/T 564-2018	Performance requirements and test methods for passenger car service brake	QC/T 564-2008	2019-01-01
107	QC/T 1096-2018	Bench test methods of fatigue life for torsion beam rear axle of passenger cars		2019-01-01
108	QC/T 1097-2018	Bench test methods of fatigue life for front axle horizontal module of passenger cars		2019-01-01
109	QC/T 491-2018	Automobile shock absorber technique requirements and test methods	QC/T 491-1999 QC/T 545-1999	2019-01-01
110	QC/T 1098-2018	Technical specification for powder metallurgy hub used in automotive clutch		2019-01-01
111	QC/T 1099-2018	Specification for collapsible spacer used in automotive drive head assembly		2019-01-01

Table of Contents

Technical specification for powder metallurgy hub used in automotive clutch

1 Scope

1.1 This standard specifies the technical requirements and test methods for the powder metallurgy hub, which is used in the clutch driven plate assembly of passenger cars.

1.2 This standard applies to the powder metallurgy hub (hereinafter referred to as hub) for clutch driven disk assemblies of passenger cars.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) is applicable to this standard.

GB/T 223.18 Methods for chemical analysis of iron, steel and alloy - The sodium thiosulfate separation iodometric method for the determination of copper content

GB/T 223.23 Iron, steel and alloy - Determination of nickel content - The dimethylglyoxime spectrophotometric method

GB/T 223.26 Iron, steel and alloy - Determination of molybdenum content - The thiocyanate spectrophotometric method

GB/T 223.69 Iron, steel and alloy - Determination of carbon contents - Gas-volumetric method after combustion in the pipe furnace

GB/T 223.73 Iron steel and alloy - Determination of iron contents - Titanium trichloride-potassium dichromate titration method

GB/T 3478.1 Straight cylindrical involute splines - Metric module side fit - Part 1: Generalities

GB/T 3478.5 Straight cylindrical involute splines - Metric module side fit - Part 5: Inspection

GB/T 5163 Sintered metal materials, excluding hardmetals - Permeable sintered metal materials - Determination of density, oil content, and open porosity

to the 6th grade accuracy, which is specified in GB/T 3478.1-2008. The accuracy grade can also be agreed between the supplier and the purchaser.

3.4 The hub shall be subjected to the static torsion test, 1 x 10^6 enhanced torsional endurance test or 5 x 10^6 torsional endurance test, in accordance with the test conditions specified in 4.4.1.2 and 4.4.2.1. It is required that the parts must not fail, after the test.

4 Detection method

4.1 Chemical composition and physical properties

4.1.1 The carbon content shall be measured according to the method specified in GB/T 223.69.

4.1.2 The copper content shall be determined according to the method specified in GB/T 223.18.

4.1.3 The nickel content shall be determined according to the method specified in GB/T 223.23.

4.1.4 The molybdenum content shall be determined, according to the method specified in GB/T 223.26.

4.1.5 Iron content shall be determined according to the method specified in GB/T 223.73.

4.1.6 Density shall be determined, according to the method specified in GB/T 5163.

4.1.7 Hardness shall be determined, according to the method specified in GB/T 9097.1.

4.2 Mechanical properties

4.2.1 For the tensile strength, prepare the tensile specimen, according to the method specified in GB/T 7963. Determine it according to the method specified in GB/T 7964.

4.2.2 For the impact toughness, prepare the impact specimen according to the method specified in GB/T 5318. Determine it according to the method specified in GB/T 9096.

4.3 Tooth and spline accuracy

The precision of tooth and splines shall be determined, according to the method specified in GB/T 3478.5.

4.4 Hub torsion test

4.4.1 Static torsion test of hub

This is an excerpt of the PDF (Some pages are marked off intentionally)

------ The End ------