Constant Velocity Universal joints for Halfshaft of Automobiles

1. Scope

This standard specifies constant velocity universal joints for halfshaft of automobiles. However, the articles used for two-wheeled vehicles, industrical vehicles, construction vehicles, and agricultural machineries shall be excluded.

Remark: In this standard, units and numerical values are based on SI (International System of Units), while units and numerical values given in { } are customary units system, and are given for reference.

2. Purpose

This standard aims to standardize the major specifications of the constant velocity universal joint, so that the designs and transactions are to be rationalized.

3. Definitions

The definitions for major terms used in this standard shall be as follows.

(1) **Halfshaft :**
A rotary shaft to transfer a power which consists of two pieces or one piece of universal joint, shaft, and etc., and is installed between a differential or final reduction gear and a wheel.

(2) **Constant velocity universal joint:**
A universal joint in which the angular velocity of input shaft is equal to that of output shaft in every working angle.

(3) **Fixed centre constant velocity universal joint:**
A constant velocity universal joint enabling to take a working angle only.

(4) **Plunging constant velocity universal joint :**
A constant velocity universal joint enabling to take a working angle and to make plunging motion.

(5) **Tripod universal joint (Fixed Type) :**
A fixed centre constant velocity universal joint in which a tripod is fixed into a tripod housing, and a working angle is taken between rollers fitted into three axes of the tripod and a forked shaft.

(6) **Tripod universal joint (Plunging Type) :**
A plunging constant velocity universal joint having roller fitted into three axes of a tripod in axially parallel linear roller grooves of a tripod housing.

(7) **Cross groove universal joint :**
A plunging constant velocity universal joint in which a driving ball is located and held by means of a cage having an external spherical surface at the cross-over position of linear ball grooves of an outer race and an inner race inclined reversely at equal angles mutually in the axial direction.

(8) **Outboard constant velocity universal joint:**
A constant velocity universal joint located at the wheel side of a halfshaft.

(9) **Inboard constant velocity universal joint :**
A constant velocity universal joint located at the differential or final reduction gear side of a halfshaft.

(10) **Nominal shaft diameter :**
A shaft diameter to be a reference for the minium static torstional destruction resistance and the allowable joint angle of a rzeppa constant velocity universal joint. The nominal shaft diameter shall be shown by the medium value between the tolerance of shaft diameter.

Reference Standard : **JASO C803-86** Glossary of Terms Relating to Propeller Shaft of Automobiles

JASO C302-72 Test Procedures of Propeller Shaft Assembly