



FIRST HARMONICS MEASUREMENTS AND MARKING FOR MOTOR VEHICLE WHEELS

ES 3.07

Page 1/2

*MESURES ET MARQUAGE 1ers HARMONIQUES DES ROUES DE VEHICULE
MESSUNG UND MARKIERUNG DER 1.HARMONISCHEN VON
KRAFTFAHRZEUG-RÄEDERN*

1 - SCOPE AND FIELD OF APPLICATION

This EUWA specification covers 1st harmonic measurements of radial run-out for wheels for passenger cars and trucks.

2 - INTRODUCTION

It is the experience of EUWA Members that if vibrational problems encountered on motor vehicles have for origin a wheel radial run-out anomaly, then the amplitude of the vibration is proportional to the 1st harmonic of the average radial run-out of the bead seats.

It is therefore EUWA a recommendation that the wheel uniformity measurements be based on the 1st harmonic of the average radial run-out of both bead seats.

3 - MEASURING CONDITIONS

- a) The wheel should be placed on the measuring fixture with reference to a flat face for the bolting up face of the disc and an expanding or conical mandrel for the centre hole.
- b) The measuring head should be positioned at approximately 8 mm. from the rim flange.
- c) The radial run-out measurement may not be independent from lateral run-out due to the influences of lateral run-out and radial run-out.
- d) A minimum of 128 points should be measured for the calculation of the first harmonic.

4 - MARKING

It may be a customer requirement to selectively assemble tyres and wheels by matching the radial force variation of the tyre to the first harmonic of average radial run-out of the wheel.

In this case the measuring machine should be equipped with a marking system (grinding, stamping, point) which will indicate the measured position of the first harmonic high spot.

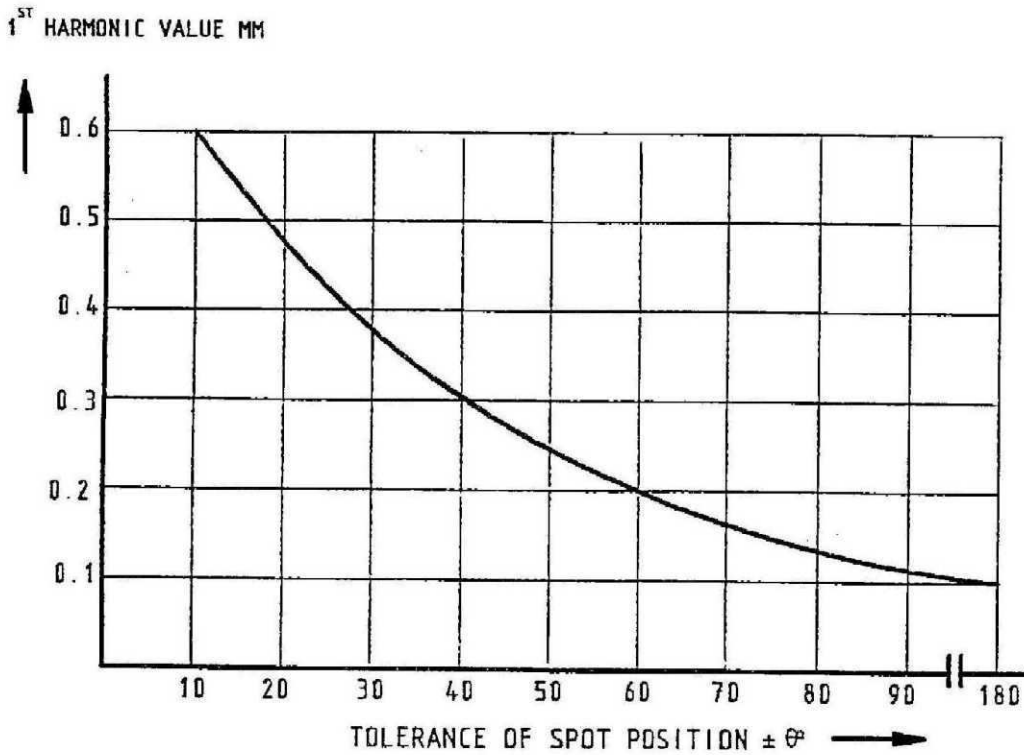
The tolerance to be applied to the precision of the spot position should be indicated by chart overleaf.

EUWA_std_307.doc

Main changes compared to the last issue:
Addition of text and drawing relevant the truck wheels.

No part of this standard may be reproduced in any form without the prior written permission of EUWA

**TABLE OF SPOT MARKING POSITION TOLERANCES
FOR CAR WHEELS**



**TABLE OF SPOT MARKING POSITION TOLERANCE
FOR TRUCK WHEELS**

Table of Spot Marking Position Tolerances for Truck wheels

