

GUIDELINES FOR CHECK AND MAINTENANCE OF LEVELS

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Key words:

ABSTRACT

FIG Commission 5 (Positioning and Measurements) is than several years ago interested and involved in questions related to standards and guidelines for survey instruments. Its WG 5.1 published 1994 in Melbourne "Recommended Procedures for routine checks of electro-optical Distance Meters (EDM). These first guidelines concerning EDM were well accepted and are today implemented by many FIG members around the world. The demand for similar guidelines for other surveying instruments has grown inside FIG and therefore it was decided 1998 at the Congress of Brighton that Commission 5 will continue and extend its efforts on guidelines for levels, total stations, laserplanes and furthermore on GPS. FIG established also for this purpose a strong relation to ISO by working as Liaison member inside ISO TC 173/SC6 and ISO TC 59/SC4.

Inside ISO, the International Standard Organisation, several Technical Commissions (TC59/SC4 and TC172/SC6) have produced different standards concerning the measuring instruments used for levelling purposes. Unfortunately these standards made in the past for the same instrument and the same purpose namely "Field procedures for determining the accuracy of surveying instruments" are often quite different because of different approaches and goals. TC59 looked from the building constructing views and TC172 from the instrument manufacturer views.

Since 1997 a Joint Working Group (JWG) common for both TC was created and works on a harmonisation and updating of these old standards. The goal is one standard for one instrument. One of the projects concerns levels and is chaired by J-M Becker. A reviewed draft proposal has been discussed at several occasion and send for comments to the national standard organisation. The final ISO standards will be published beginning 2002.

The following paper will present field procedures (guidelines) that FIG is preparing at the moment and will recommend for the check of the accuracy of levelling instruments for different field applications.

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