



CABLE BAND BOLT READINGS.

On the 29th August , verbal instruction was give by Hydra- tight on the use of an ultra- sonic portable bolt scan device. Instruction was given to both bridge inspectors , also assistant maintenance inspector ,maintenance manager & E.S.M. As instructed bolt readings were to be achieved by means of the attachment of a wave transmission transducer to the bolt specified & using a variable gain value method , where two optimum peaks would be reached on the machine one high on the low range & one on the high range. Then by working through the range of the two optimum levels shown on a digital readout a constant power level was reached on the digital display unit & the recorded bolt reading was then taken, the only problem found by the use of this method was that the bolt readings taken at both peaks showed a fluctuating variation on final readings taken .

It was these fluctuating variable readings that Through consultation prompted both bridge inspectors to approach maintenance E.S.M. to discuss our concerns related to our findings. During the discussion, bridge inspectors asked E.S.M. if gain value recorded on original results sheet by Monberg – thorsen had been taken into consideration and whether or not should be used in the equation to achieve accurate readings with reference to past readings recorded on the previously recorded data supplied by consultants fairhursts. Following consultation bridge inspectors decided to carry out an exercise where bolt readings originally taken at three specific locations by means of the use of the variable gain method were taken and the achieved results recorded. A second visit to the same locations followed but using the gain method readings supplied on the information sheet by fairhursts. Bolt readings showed a difference from the original readings taken using the variable method. A third visit using the same gain references as the second visit was carried out and the readings taken were in a range more accurate with the previously recorded results of the second visit .

Having conducted this exercise it throws us in to a little bit of uncertainty. Do we continue using the variable gain method or do we adopt the gain method readings as per the supplied information sheet. Following contact & discussions with representatives from Hydra – tight they agreed that if the original readings recorded on the information sheet were taken and a satisfactory gain method reached then the established the gain method should be used to obtain a current reading.

It should also be noted that through consultation & communication with consultants fairhurst & partners by the E.S.M. that no re-tensioning of the cable band bolts would take place regardless of the current bolt reading information given.

Bridge inspector.

