FASET Bulletin STEP-02 (Revision 1)

Impact Wrenches

Extensive testing has been carried out by the NASC (National Association of Scaffolding Confederation) on tightening couplers with two popular types of impact wrenches and a wide range of drop forged couplers. The couplers were from different suppliers in various conditions, new, used, lubricated and unlubricated. Over 60 tests were completed.

The NASC analysed the data and found no concerns or adverse effects to the couplers resulting from the tests carried out with both impact wrenches and the traditional scaffold spanners. Subsequently the NASC has deemed the use of impact wrenches for scaffolding purposes is acceptable (https://nasc.org.uk/blog/article/nasc-position-on-the-use-of-impact-wrenches/).

FASET support this position when installing Edge Protection and Stair Towers. The following must be considered before selecting impact wrenches to be used by operatives:-

The recommended force required to tighten a fitting is 50 N/m as stated in EN 74. Most wrenches have stated torque settings (N/m) in excess of this recommended figure. During testing it was noted that settings published by the manufacturer can often differ greatly from what is achieved in practice. It is therefore recommended that any employer considering authorising the use of impact wrenches carries out testing to establish that the type of impact wrench which they intend to authorise for use by their employees is capable of applying the correct torque to scaffold fittings on a consistent and recurring basis. Further to completion of an adequate risk assessment by the employer the impact wrench may then be deemed fit for purpose for erection/dismantling and alterations to stair towers and edge protection by their employees.

Evidence of this testing shall be made available when required to demonstrate procedures are in place to ensure only impact wrenches that have been deemed fit for purpose continue to be used by Operatives.

It is recommended that prior to the use of an impact wrench on site, each employee should first undergo a suitable period of training, familiarisation and monitoring, to ensure that the impact wrench is being used in the correct manner at all times. Employers should carry out regular toolbox talks regarding company policy and the rules for the safe use of impact wrenches to ensure that all operatives understand the requirements.

Employers should adequately assess the risk for their own particular situation and ensure that they put in place protocols to cover safe use. A suitable vibration survey should be carried out by a competent person and allowable trigger times per day (possibly quantified as the number of couplers that can be tightened/loosened) have been communicated to the scaffolders. (If operatives are providing their own impact wrenches, then vibration readings will need to be conducted with each tool, before allowing them to be used).

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FASET
Fall Arrest Safety Equipment Training

Monitoring of vibration and noise will need to be repeated with individual impact wrenches at regular intervals to check for wear and tear, changes to vibration levels, battery life etc.

A suitable noise survey should be carried out and if required, operatives must be issued with and wear appropriate hearing protection at all times when using the tools.

This statement only applies to drop forged scaffold fittings. Operatives must not use impact wrenches with ‘pressed’ type scaffold fittings.

It has been shown that impact wrenches can also seriously damage certain types of drop forged coupler. Certificates of suitability for the use of impact wrenches should therefore be obtained from manufacturers of all drop forged couplers used by the installing organisation.

If nuts are accidentally removed from the bolts when using impact wrenches, damage to threads is likely to occur due to the peening. Each fitting should therefore be quarantined until nuts, bolts and washers have been replaced or the fitting should be discarded.

Regular audits/inspections should be carried out by supervision or management and recorded, to ensure that the above actions are adhered to.