

Re: Questions regarding maximum yield strength for standard hardened steel dowel pins

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Source: <http://sci.tech-archive.net/Archive/sci.materials/2006-03/msg00005.html>

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 - *Date:* Thu, 02 Mar 2006 08:27:38 +0100
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jbuch wrote:

You can figure out how much the strength variation could be by google searching for "Correlation hardness ultimate strength rockwell c" meaning that you are looking for the correlation between ultimate tensile strength and the hardness as measured on the Rockwell "C" scale. You will be able to see that there is an enormous strength difference between Rockwell C47 hardness and C58 hardness.

AFAIK there is a correlation between hardness and ultimate tensile strength for steels with a certain plastic deformability. For hardened steels, it is difficult to measure tensile strength, because fracture is flaw-controlled here. Just curious: Did you ever carry out a tensile test using a C58-hardness-specimen?

Unfortunately, I don't have the standards in my actual office, but I remember that the correlation between hardness and UTS is valid only up to a certain maximum hardness.

Michael Dahms

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