

**PTI DC45.1-12 Recommendations for Stay Cable Design,
Testing, and Installation, Addendum #1, November 2014**

[Update your Recommendations by changing the items as shown]

Page 11, Section 3.2.1.1, second paragraph, second sentence:

**3.2.1 – Wire
3.2.1.1 — Quality Control**

The wire specimens shall be tested at an upper stress of $0.45f_s'$ or $0.55f_s'$. At least 30% and not more than 50% of the samples shall be tested at $0.55f_s'$...

Page 12:

Table 3-1—Summary of stress ranges for fatigue tests

Type of stay	No. of cycles	Stay test fatigue stress range*, MPa		Component fatigue test stress range†, MPa**	
		<u>Upper-bound stress level of $0.45f_s'$</u>	<u>Upper-bound stress level of $0.55f_s'$</u>	<u>Upper-bound stress level of $0.45f_s'$</u>	<u>Upper-bound stress level of $0.55f_s'$</u>
Strand‡ or uncoupled bars§	$2 \times 10^6 +$	159	<u>121</u>	213	<u>175</u>
	2×10^6			228	<u>190</u>
	5×10^5			302	<u>264</u>
	1×10^5			443	<u>405</u>
Wire	$2 \times 10^6 +$	194	<u>124</u>	282	<u>212</u>
	2×10^6			297	<u>227</u>
	5×10^5			370	<u>300</u>
	1×10^5			512	<u>442</u>
Bars§ with (epoxy-filled) couplers	$2 \times 10^6 +$	105	<u>69</u>	<u>99</u> <u>117</u>	<u>81</u>
	2×10^6			122	<u>86</u>
	5×10^5			164	<u>128</u>
	1×10^5			244	<u>208</u>

*To ensure fatigue quality of stays, it is recommended that stay specimens be tested at 2×10^6 cycles.

†Individual strand, bar, wire, or glued, coupled bar, respectively.

‡See Section 3.2.2 and 3.2.3.

§See Section 3.2.4.

||See Section 3.2.1.

**~~Upper bound stress level shall be $0.45f_s'$~~

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[Update your Recommendations by changing the items as shown]

Page 14, Section 3.2.2.1, second paragraph, second sentence:

3.2.2 – Strand

3.2.2.1 — Quality control

The strand specimens shall be tested at an upper stress of $0.45f_s'$ or $0.55f_s'$. At least 30% and not more than 50% of the samples shall be tested at $0.55f_s'$...

Page 17, Section 3.2.4.1, third paragraph, second sentence:

3.2.4 – Bar

3.2.4.1 — Quality control

The bar specimens shall be tested at an upper stress of $0.45f_s'$ or $0.55f_s'$. At least 30% and not more than 50% of the samples shall be tested at $0.55f_s'$...

Page 36, Section 4.2, fifth paragraph

4.2 — Acceptance testing of stay cables

Stay cable specimens shall have a minimum length of 3.5 m. The anchorages of the stay cable specimens shall be supported on wedge-shaped shim plates, creating angular deviations of 0.01 radians, and oriented such as to create an S-shaped cable profile. (Fig. 4.2) The 2Two of the 3 stay cable specimens shall be tested for 2 million cycles for an upper stress of $0.45f_s'$ and a stress range as shown in Table 3-1. The third cable specimen shall be tested for 2 million cycles at an upper stress of $0.55f_s'$ and a stress range of 6.5% f_s' for strand or bars, 7.5% f_s' for wires as shown in Table 3-1. During fatigue testing, not more than 2% of the number of individual wires (rounded to the nearest whole number) may fail. Any failure of bars shall result in rejection of the stay cable system. No failure shall occur in the anchorage material, or in any component of the anchorage during the fatigue tests. Any failure of anchorage components or anchorage material during the fatigue test shall be cause for rejection of the test.