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Approved by General Counsel

TR-14.7 Meeting Report

Date: 10/19-20/04

Location: Denver, CO

Approved: 05/07/12



COMMITTEE CORRESPONDENCE

TELECOMMUNICATIONS INDUSTRIES ASSOCIATION (TIA)
Standards and Technology Department
Meeting Report
Subcommittee TR 14.7 - Steel Antenna Towers and Antenna Supporting Structures
October 19th & 20th, 2004

**Embassy Suites Hotel
Denver International Airport
7001 Yampa Street
Denver, CO 80249**

October 19th Members Present

Individuals also attending October 20th are designated with a (10/20)

Don Doty	don.doty@spectrasitebg.com	Doty-Moore Tower Services (10/20)
Mark Fantozzi	mark.fantozzi@dielectric.spx.com	TCI (10/20)
Martin DeLaRosa	martind@fwtinc.com	FWT, Inc. (10/20)
Chris Martin	cjmartin@glenmartin.com	Glen Martin Engineering (10/20)
Tim Donohue	tdonohu@kci.com	KCI Technologies (10/20)
John Wahba	jwahba@radiancorp.com	Radian Communication Services Corp. (10/20)
Mark Malouf	malouf@maloufengineering.com	Malouf Engineering International (10/20)
David Hawkins	dhawkins@pjfweb.com	Paul J. Ford & Company (10/20)
John Erichsen	jerichsen@valmont.com	Valmont Communications (10/20)
David Brinker	david.brinker@radiancorp.com	Radian Communication Services Corp. (10/20)
Marcello Posada	marcelloposada@pennsummit.com	PennSummit Tubular, LLC (10/20)
Madison Batt	mbatt@tower-engineering.com	Tower Engineering Corporation (10/20)
Jim Walker	jlw@walkerengineer.com	Walker Engineering Inc. (10/20)
Keith Tindall	ktindall@sabrecom.com	Sabre Communications Corp. (10/20)
Thomas Hoenninger	tom.hoenninger@spectrasitebg.com	Stainless Towers (10/20)
Simon Weisman	towers@weisman-consultants.com	Weisman Consultants (10/20)
George Kouba	georgek@ttitoweranalysis.com	Tower Technology (10/20)
Michael Morel	mmorel@engend.com	Engineered Endeavors (10/20)
Michael DeBoer	miked@pintowers.com	Pinnacle Towers Inc. (10/20)
Bill Garrett	william.garrett@spectrasite.com	Spectrasite (10/20)
Mike Hemmati	mhemmati@structel.com	Structel International Inc. (10/20)
Peter Moskal	pmoskal@bechtel.com	Bechtel Telecommunications (10/20)
Bill Griswold	billgriswold@iets.com	IETS (10/20)
Ta-Wen Lee	tlee@fwtinc.com	Fort Worth Tower (10/20)
Scott Wallace	wallacesl@c-b.com	Carter & Burgess (10/20)
Craig Snyder, Chair	snyder@siouxfallstower.com	Sioux Falls Tower Specialists, Inc. (10/20)
Brian Reese, Vice Chair	breeze@aerosolutionsllc.com	AeroSolutions LLC (10/20)

October 19th Members Absent

Al Kraft	towereng@btigate.com	Tower Kraft Engineering
Doug Moore	dmoore@alliedtower.com	Allied Tower
Kathy MacLean	kathym@aprel.com	APREL Laboratories
Jeffrey Gilliland	jgilliland@dc-engineers.com	DCI Engineers/QST
Kevin Bauman	kbauman@pjfweb.com	Paul J. Ford & Company
Patrick Howey	www.natehome.com	NATE
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Jennifer Franz	jfranz@tia.eia.org	TIA
Alain Peyrot	apeyrot@powline.com	PowerLine Systems
Barry Bayless	barry@nsec.com	National Steel Erectors
Cabot Goudy	cgoudy@entrex.com.com	Entrex Communications Service, Inc.
Edgar Turcotte	eturcotte@tadrosassociates.com	Tadros Associates
Jean-Alain LeCordier	jeanlecordier@klnetowers.com	Kline Iron & Steel Inc
Ernest Jones	ernie@eriinc.com	Electronics Research Inc.
Ciro Martoni	marc@martonicyr.com	Martoni, Cyr & Associates
V.G. Duvall	vg@barantelecom.com	Baran Telecom
Roger Barton	rwbarton@fibrebond.com	Fibrebond Resources, Inc.
Paul Bergman	pbergman@bergmanassociates.com	Bergman Associates
Dennis Abel	dabel@nelloinc.com	Nello Corp.
Barry Bayless	barry@nsec.com	National Steel Erectors

October 19th Others Present

Jim Kyriacopoulos	jim.kyriacopoulos@crowncastle.com	Crown Castle (10/20)
Douglas Pineo	doug.pineo@crowncastle.com	Crown Castle (10/20)
David K. Davies	dave@eriinc.com	Electronics Research Inc. (10/20)
John Robinson	john@eriinc.com	Electronics Research Inc.(10/20)
James Ruedlinger	jruedlinger@eriinc.com	Electronics Research Inc. (10/20)
Adam Jones	ajones@sebagotechnics.com	Sebago Technics (10/20)
Greg Burbage	gburbage@hseinc.com	HSE, Inc. (10/20)
Jean Carriere	jcarrier@morrisonhershfield.com	Morrison Hershfield, Ltd. (10/20)
Denis Hum	jdhum@morrisonhershfield.com	Morrison Hershfield, Ltd. (10/20)
Stephen Yeo	syeo@sabrecom.com	Sabre Communications Corp. (10/20)
Sterling Smith	ssmith1@bellsouth.net	SAE, Inc. (10/20)
Jim Jarrett	jim.jarrett@valmont.com	Valmont (10/20)

October 19th, 2004

8:00 – Meeting of TR 14.7 Subcommittee – A quorum was present

8:10 – Roll Call & Introduction – Craig Snyder, Sioux Falls Tower, TR 14.7 Chairman

- a. Plan for meetings – Tuesday and Wednesday, October 19th & 20th - review of compiled Subcommittee comments to G.5. The goal is to achieve Subcommittee consensus on G.5. The Chairman outlined the ballot and comment process.
- b. Craig Snyder thanked the Editorial Committee (David Brinker, Radian/Rohn; Mark Malouf, Malouf Engineering International; John Erichsen, Valmont Communications; John Wahba, Radian Communications) for their continued work and commitment in preparing G.5.
- c. The Chair requested members update the distributed membership list.
- d. The Chair reviewed membership requirements and voting eligibility. Voting eligibility is maintained by being current with membership dues and attendance at two meetings.
- e. The Chair encouraged anyone who was aware of intellectual property that relates to the work of TR-14.7 to make the appropriate statements as early as possible in the process. The Chair directed the members to the TIA Engineering Manual, and the TIA web site (www.tiaonline.org), for the specific requirements.

8:20 – Moment of Silence - In memory of Dan Horn, Subcommittee member who passed during the past year.

8:25 – Old Business – none

8:35 – Review of Subcommittee Comments on G.5 – Craig Snyder, Chairman

- a. Reviewed Keith Tindall's comments. Comments reviewed in entirety; group consensus reached after comments incorporated.
- b. Reviewed John Robinson and David Davies' comments. Motion to move microwave degradation criteria to the annex by Dave Brinker and seconded by Simon Weisman. Motion passed. Motion to move criteria for broadcast antennas degradation to the annex by Dave Davies and seconded by John Robinson. Motion was rejected. Antenna and microwave degradation issues should be addressed in revision H. Also discussed for possible inclusion in revision H was the method for calculating section properties for 60 degree (Schifflerized) angles. Refer to Murty Madugula's formulas in G.5 comments document. Comments reviewed in entirety; group consensus reached after comments incorporated.

10:05 – Break

10:15 – Subcommittee Housekeeping Discussion – Craig Snyder, Chairman

- a. Acceptance of last meeting's report from St. Louis. Motion by Simon Weisman and seconded by Martin De La Rosa. Motion carries by unanimous vote.
- b. The Chair reviewed TIA rules on sending Subcommittee correspondence. All Subcommittee documents are available on TIA's web site (www.tiaonline.org) and are only available to Subcommittee members.

10:15 – Review of Subcommittee Comments on G.5 (continued)

- a. Reviewed Murty Madugula's comments. Comments reviewed in entirety; group consensus reached after comments incorporated.
- b. Reviewed Bill Garrett's comments. Maintenance intervals for monopoles as five year interval - motion by Bill Garrett and seconded by Mike Hemmati. Motion approved. In Annex J.1.A., add a clause requiring a visual inspection of cracks in welded connections. Modify maintenance language: 14.2-a. Three year and five year intervals. Change coastal environments to coastal regions and corrosive atmospheres to corrosive environments. Remove 'recommended' language in Annex J. Motion by Bill Garrett and seconded by Mark Malouf. Motion approved. Comments reviewed in entirety; group consensus reached after comments incorporated. Issues to be considered for revision H with respect to maintenance and inspection: corrosion and fatigue on guyed cables, qualification of manufacturers, and fatigue categories on welded joints.

11:40 – Lunch

1:00 – Review of Subcommittee Comments on G.5 (continued)

- a. Reviewed Tom Hoenninger's comments. Motion to revise language on rigorous analysis by Dave Brinker. Mark Malouf seconded and the motion passed. Motion by Dave Brinker to remove Table 15.1 and utilize Table 2.1. Revise Table 2.1 – moving examples back to Purchaser's Checklist. Seconded by Dave Hawkins. Motion approved. Simon Weisman proposed a modification to 15.7.1: Modifications to existing structures shall not proceed without installation documents. Seconded by Mike Hemmati and approved. Section 7.5 – move to Purchaser's Checklist low frequency dampers only. Motion by Tom Hoenninger and seconded by John Wahba. Motion approved. Section 13.3.2 Guy Tensions - Dave Brinker motioned that 1 in and smaller cables below 10% and larger diameter cables 5%. Seconded by Don Doty and approved. Comments reviewed in entirety; group consensus reached after comments incorporated.

3:15 - Break

3:30 – Review of Subcommittee Comments on G.5 (continued)

- a. Reviewed Ta-Wen Lee's comments. Comments reviewed in entirety; group consensus reached after comments incorporated.
- b. Reviewed Alain Peyrot's comments. Motion by Dave Brinker to add to Scope on page 7 that other use structures (utility, water tower, sign structures, etc.) are designed to their applicable codes; however EPA values for mounts and antennas are calculated per the G Standard. Second by John Erichsen with motion approved. Comments reviewed in entirety; group consensus reached after comments incorporated.
- c. Reviewed Doug Pineo's comments. Comments reviewed in entirety; group consensus reached after comments incorporated. Motion by Dave Brinker to modify 4.9.1 to add $F_{ub} = 120$ ksi to calculate design tensile and shear strengths. Seconded by John Robinson. Motion approved. Comments reviewed in entirety; group consensus reached after comments incorporated.
- d. Reviewed Craig Snyder's comments. Comments reviewed in entirety; group consensus reached after comments incorporated.
- e. Reviewed Peter Moskal's comments. Comments reviewed in entirety; group consensus reached after comments incorporated.
- f. Reviewed Bill Griswold's comments. Motion to revise 4.4.1 to 1.5% to 2.5% range for minimum bracing resistance and minimum bracing resistance be equal to 1.5% in 15.6 by Dave Brinker. Seconded by John Erichsen. Motion approved. Comments reviewed in entirety; group consensus reached after comments incorporated.

5:55 – Continuation of Meeting – Wednesday, October 20th, Embassy Suites Hotel Denver Airport, 8:00 AM.

6:00 – Conclude Meeting – Craig Snyder, Chairman

Motion to adjourn by Dave Hawkins and seconded by John Wahba. Motion carries by unanimous vote.

Adjournment

October 20th, 2004

8:00 – Meeting of TR 14.7 Subcommittee – A quorum was present

8:05 – Roll Call & Introduction – Craig Snyder, Chairman

- a. Plan for meeting - review remaining G.5 Subcommittee comments
- b. Ginpole discussion postponed

8:10 – Moment of Silence - In memory of Joe Vellozzi, a veteran of the tower industry who passed last week.

8:15 – Review of Subcommittee Comments on G.5 (continued from 10/19)

- a. Reviewed Don Doty's comments. Address in revision H erection stresses and also with respect to particular foundations. Member replacements will be further addressed in revision H. Comments reviewed in entirety; group consensus reached after comments incorporated.
- b. Reviewed Dave Hawkins' comments. Base plate design methodologies, weld details of the base connection on monopole, and fatigue issues will be addressed in revision H. Comments reviewed in entirety; group consensus reached after comments incorporated.
- c. Reviewed Brian Reese's comments. Change Section 4.9.10.1 – motion by Brian Reese to remove 'flange' requirements for complete penetration welds. Seconded by Mike Hemmati. Motion approved. Motion by Brian Reese with respect to Section 13.3.5 to eliminate requirements for 'three' jacking points. Seconded by Dave Hawkins. Comments reviewed in entirety; group consensus reached after comments incorporated.
- d. Reviewed Ernie Jone's comments. Comments reviewed in entirety; group consensus reached after comments incorporated.
- e. Reviewed Mike Hemmati's verbal comments. Comments reviewed in entirety; group consensus reached after comments incorporated.
- f. Reviewed miscellaneous Subcommittee verbal comments. Section 3.6.2 – motion by Dave Brinker to add 'Full wind pressure shall be applied to guys for any pattern loading.' Seconded by John Erichsen. Motion approved. John Erichsen requested clarification in Table 2-7 related to drag coefficients with respect to 16-sided and 18-sided poles. Revision F accounted for varying bend radii for fabricated polygonal sections. The proposed format simplifies the approach and was left unchanged by the Subcommittee. Motion by Dave Davies and seconded by Mark Malouf to revise Annex F – change 50 ohm-m soil to 150 ohm-m soil. Motion approved.
- g. Editorial clean-up still required of the entire Standard and has commenced.

Craig Snyder requested further Subcommittee comments. No further received.

9:35 – IBC Update - Tom Hoenninger, Stainless

- a. The acknowledgement of Revision G in IBC 2006 will require the publication of G by July 1st, 2005.
- b. Tom will be representing the Subcommittee at an upcoming IBC meeting.

9:45 – Schedule for G Going Forward – Craig Snyder, Chairman

- a. Target goal for G.6 release is end of November
- b. Public ballot process during December
- c. January 2005 resolution of comments
- d. February publication date
- e. Motion by Mike Hemmati and seconded by Dave Davies to allow a one year period after publication for use of both revision F and G. Motion failed. John Wahba motioned that revision G have an effective date of six months after publishing. Seconded by Mark Malouf. Motion approved. The Chair to discuss the effective date with the TIA.
- f. Potential TR 14.7 meeting next summer.

10:05 – Subcommittee Assignments – Craig Snyder, Chairman

- a. All data in county listings will be reviewed by John Erichsen and Bill Griswold.
- b. All data for the seismic tables and maps will be reviewed by Mark Fantozzi.
- c. Both tasks have completion dates by 11/24/04.
- d. The Chair to discuss the six-month effective date with the TIA after publication of G.

10:10 – Subcommittee Vote on G.5 – Craig Snyder, Chairman

- a. Motion by Jim Walker to approve G.5 with meeting amendments and seconded by Martin de Larosa. Motion approved unanimously.

10:15 – Ginpole Update – Craig Snyder, Chairman

- a. Ernie Jones and Pat Moore are task group co-chairmen and will be working on revisions to the Standard including construction stresses and procedures.
- b. Due to key absences, the Ginpole discussion will be postponed.

11:00 – Conclude Meeting – Craig Snyder, Chairman

- a. Motion by Simon Weisman and seconded by John Robinson to thank the Editorial Committee for their work on revision G. Motion approved unanimously.
- b. Motion to adjourn by Don Doty and seconded by Mike Hemmati. Motion also carries by unanimous vote.

Adjournment

The meeting was conducted in accordance with the TIA Legal Guides and the Engineering Manual.

End of Report

By: Brian Reese, P.E. – Vice Chairman & Secretary

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