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UNITED STAT	ES PATENT AND TRAI	DEMARK OFFICE
BEFORE THE	E PATENT TRIAL AND A	— APPEAL BOARD
Т	ETRA TECH CANADA I Petitioner	NC.,

v.

GEORGETOWN RAIL EQUIPMENT COMPANY, Patent Owner

Case IPR2019-01581 Patent No. 8,081,320

PETITIONER'S UPDATED EXHIBIT LIST

Further to 37 C.F.R. § 42.63(e), Petitioner Tetra Tech Canada Inc. hereby submits a current listing of Petitioner's Exhibits to counsel for Patent Owner. Exhibits 1043-1045 are being filed today.

Filed Exhibits	Description	Previously Submitted
Ex-1001	U.S. Patent No. 8,081,320 to Villar et al. (the '320 patent").	X
Ex-1002	Patent Prosecution History of U.S. Patent No. 8,081,320.	X
Ex-1003	Curriculum Vitae of Nikos Papanikolopoulos, Ph.D.	X
Ex-1004	Declaration of Nikos Papanikolopoulos, Ph.D.	X
Ex-1005	U.S. Patent Application Publication No. 2006/0017911 A1 to Villar et al. ("Villar").	X
Ex-1006	Document showing tracked changes between the text of the as-filed specifications of the '329 patent and the '320 patent.	X
Ex-1007	John Choros et al., "Prevention of Derailments due to Concrete Tie Rail Seat Deterioration," Proceedings of ASME/IEEE Joint Rail Conference & Internal Combustion Engine Spring Technical Conference. No. 40096 (2007) ("Choros"), including declaration of Rachel J. Watters.	X
Ex-1008	U.S. Patent Publication Application No. 2003/0140509 A1 to Casagrande ("Casagrande").	X
Ex-1009	International Patent Pub. No. WO 2005/036199 A2 to Szwilski et al. ("Szwilski").	X
Ex-1010	U.S. Patent No. 4,899,296 to Khattak ("Khattak").	X
Ex-1011	U.S. Patent No. 5,787,815 to Andersson et al. ("Andersson").	X
Ex-1012	Russell H. Lutch et al., "Causes and Preventative Methods for Rail Seat Abrasion in North America's Railroads," Conference Paper (October 2014).	X
Ex-1013	Nigel Peters and Steven R. Mattson, "CN 60E Concrete	X

	Tie Development," AREMA: 25 (2003).	
Ex-1014	U.S. Patent No. 5,245,855 to Bill Burgel et al. ("Burgel").	X
Ex-1015	Reiff, R., 1995, "An Evaluation of Remediation Technologies for Concrete Tie Rail Seat Abrasion in the FAST Environment," American Railway Engineering Association Bulletin, v 96, bulletin 753, Washington, DC, pp. 406-418.	X
Ex-1016	Federal Register, Vol. 73, No. 226, Pages 70695-70696.	X
Ex-1017	Federal Register, Vol. 76, No. 175, Pages 55819-55825.	X
Ex-1018	National Transportation Safety Board, "Railroad Accident Brief" (NTSB/RAB-06/03).	X
Ex-1019	Arthur L. Clouse et al. " <i>Track Inspection Into the 21</i> st <i>Century</i> " (September 19, 2006).	X
Ex-1020	Federal Register, Vol. 76, No. 63, Pages 18001-18346 (18073)	X
Ex-1021	Railroad Safety Advisory Committee (RSAC), Minutes of Meeting, December 10, 2008, Washington, D.C.	X
Ex-1022	United States Provisional Application No. 60/584,769.	X
Ex-1023	U.S. Patent No. 6,496,254 to Bostrom et al. ("Bostrom").	X
Ex-1024	Anders Åstrand, "Smart Image Sensors," Linköping Studies in Science and Technology. Dissertations. No. 319 (1993).	X
Ex-1025	Mattias Johannesson, "Sheet-of-light Range Imaging," Linköping Studies in Science and Technology. Dissertations No. 399 (1995).	X
Ex-1026	T. Kanade, ed., <i>Three-Dimensional Machine Vision</i> , Kluwer Academic Publishers, 1987 ("Kanade").	X
Ex-1027	Declaration of Pamela Stansbury.	X
Ex-1028	Mattias Johannesson, "Architectures for Sheet-of-Light Range Imaging," Report No. LiTH-ISY-I-1335, Image Processing Group, Department of Electrical	X

	Engineering, Linköping University (Feb. 27, 1992).	
Ex-1029	Erik Åstrand, "Automatic Inspection of Sawn Wood," Linköping Studies in Science and Technology. Dissertations. No. 424 (1996).	X
Ex-1030	M. de Bakker et al., "A Smart Range Image Sensor," Proceedings of the 24 th European Solid-State Circuits Conference (1998):208-11;xii+514.	X
Ex-1031	Murhed, Anders, "IVP Integrated Vision Products," Pulp and Paper International 44.12 (Dec. 1, 2002).	X
Ex-1032	U.S. Patent No. 7,084,989 to Johannesson et al. ("Johannesson").	X
Ex-1033	Dr. Mats Gokstorp et al., "Smart Vision Sensors," International Conference on Image Processing (Oct. 4-7, 1998), Institute of Electrical and Electronics Engineers, Inc.	X
Ex-1034	Mattias Johannesson, "Can Sorting using sheet-of-light range imaging and MAPP2200," Institute of Electrical and Electronics Engineers; International Conference on Systems, Man and Cybernetics (Oct. 17-20, 1993).	X
Ex-1035	Newman et al., "A Survey of Automated Visual Inspection," Computer Vision an Image Understanding Vol. 61, No. 2, March, pp. 231-262, 1995.	X
Ex-1036	U.S. Patent No. 7,023,539 B2 to Kowalski.	X
Ex-1037	U.S. Patent No. 6,647,891 to Holmes et al.	X
Ex-1038	U.S. Patent No. 6,356,299 to Trosino et al.	X
Ex-1039	M. Johannesson, <i>SIMD Architectures for Range and Radar Imaging</i> , PhD thesis, University of Linköping (1995).	X
Ex-1040	Railroad Safety Advisory Committee (RSAC), December 10, 2008 Meeting Agenda, Washington, D.C.	X
Ex-1041	Railroad Safety Advisory Committee (RSAC), "Proposed Concrete Tie Draft Rule Text for RSAC VOTE," December 10, 2008, Washington, D.C.	X
Ex-1042	John Choros et al., "Prevention of Derailments due to Concrete Tie Rail Seat Deterioration," Proceedings of	X

	ASME/IEEE Joint Rail Conference & Internal Combustion Engine Spring Technical Conference. No. 40096, https://rosap.ntl.bts.gov/view/dot/12053 (online version, published March 13, 2007)	
Ex-1043	Deposition Transcript of Gregory T. Grissom, dated February 11, 2020, in IPR2019-00619 and IPR2019-00662 REDACTED	
Ex-1044	Deposition Transcript of John J. Kainer, dated February 12, 2020, in IPR2019-00619 and IPR2019-00662 REDACTED	
Ex-1045	Jahanhin, R. et al. "Automated Region of Interest Detection of Spiculated Masses on Digital Mammograms," SSAIA 2008, pp. 129-132.	

Respectfully submitted,

Dated: August 12, 2020 By: /Aaron L. Parker/

Aaron L. Parker, Lead Counsel Reg. No. 50,785

Counsel for Petitioner Tetra Tech Canada Inc.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing **Petitioner's Updated Exhibit List** and Exhibits 1043-1045 were served on August 12, 2020, via email directed to counsel of record for the Patent Owner at the following:

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