EXHIBIT INDEX

Ex #	Exhibit Description
2001	Expert Declaration of Dr. Michael Shamos ("Shamos Declaration")
2002	*Curriculum Vitae* for Dr. Michael Shamos
2003	Joint Claim Construction Chart – Amsted Rail Company, Inc., v. Hum Industrial Technology, Inc., et al., Civil Action No. 4:22-cv-00445-AGF (E.D. Mo. March 31, 2023) ("District Court Claim Construction Chart")
2004	Prosecution history of U.S. App. No. 13/842,427 (the '427 Application) which is issued as U.S. Pat. No. 9,365,223
2005	Prosecution History of U.S. App. No. 13/105,293 to Armitage ("Armitage Prosecution History")
2006	*Reserved*
2007	*Reserved*
2008	*Reserved*
2009	*Reserved*
2010	Expert Declaration of Dr. Michael Shamos in support of Patent Owner's Response and Motion to Amend CONFIDENTIAL/REDACTED
2011	Internet Archive Capture of https://www.merriam-webster.com/dictionary/level, dated May 4, 2012, available at https://web.archive.org/web/20120504202949/https://www.merriam-webster.com/dictionary/level, last visited Sept. 29, 2023
2012	Internet Archive Capture of https://www.merriam-webster.com/dictionary/fault, dated May 11, 2012, available at https://web.archive.org/web/20120511011453/https://www.merriam-webster.com/dictionary/fault, last visited Sept. 29, 2023
2013	Declaration of Andrew Martin CONFIDENTIAL/REDACTED
2014	Declaration of Jay Monaco CONFIDENTIAL/REDACTED
2015	2010-03-18 B. Wilson Email CONFIDENTIAL
2016	2010-03-24 B. Wilson Email CONFIDENTIAL

2017	IONX Information from the Edge CONFIDENTIAL
2018	Metadata for IONX Information from the Edge Ex. 2017
2019	2010-03-31 B. Wilson Email CONFIDENTIAL
2020	2010-04-04 A. Martin Email CONFIDENTIAL
2021	2010-04-03 R. Bury Email CONFIDENTIAL
2022	2010-04-08 W. Lefebvre Email CONFIDENTIAL
2023	2010-04-06 B. Wilson Email CONFIDENTIAL
2024	2010-04-06 A. Martin Email CONFIDENTIAL
2025	2010-04-07 B. Wilson Email CONFIDENTIAL
2026	2010-04-06 M. Lehmer Email CONFIDENTIAL
2027	2010-04-07 B. Wilson Email CONFIDENTIAL
2028	2010-04-07 A. Martin Email CONFIDENTIAL
2029	March 2010 ARX Engineering Status CONFIDENTIAL
2030	2010-04-08 B. Cantwell Email CONFIDENTIAL
2031	2010-04-13 W. Lefebvre Email CONFIDENTIAL
2032	2010-04-12 R. Adamec Email CONFIDENTIAL
2033	2010-04-14 B. Yates Email CONFIDENTIAL
2034	2010-04-15 A. Martin Email CONFIDENTIAL
2035	April 2010 ARX Engineering Status CONFIDENTIAL

2036	2010-05-11 A. Zagouris Email CONFIDENTIAL
2037	2010-05-12 A. Martin Email CONFIDENTIAL
2038	2010-05-12 A. Martin Email CONFIDENTIAL
2039	2010-05-18 A. Martin Email CONFIDENTIAL
2040	2010-03-26 M. Lehmer Email CONFIDENTIAL
2041	2010-03-28 B. Wilson Email CONFIDENTIAL
2042	2010-07-02 A. Martin Email CONFIDENTIAL
2043	2010-06-01 C. Tarawneh Email CONFIDENTIAL
2044	2010-06-01 A. Martin Email CONFIDENTIAL
2045	May 2010 ARX Engineering Status CONFIDENTIAL
2046	2010-06-11 C. Tarawneh Email CONFIDENTIAL
2047	2010-06-02 A. Martin Email CONFIDENTIAL
2048	June 2010 ARX Engineering Status CONFIDENTIAL
2049	2010-07-19 B. Wilson Email CONFIDENTIAL
2050	2010-07-19 A. Martin Email CONFIDENTIAL
2051	2010-07-27 A. Martin Meeting Invite with UTPA CONFIDENTIAL
2052	2010-08-02 R. Bury Email CONFIDENTIAL
2053	July 2010 ARX Engineering Status CONFIDENTIAL
2054	2010-04-07 B. Wilson Email CONFIDENTIAL

2055	2010-04-12 A. Martin Email CONFIDENTIAL
2056	2010-04-12 A. Martin Email CONFIDENTIAL
2057	2010-04-30 A. Martin Email CONFIDENTIAL
2058	2010-03-31 A. Martin Email (via B. Wilson email address) CONFIDENTIAL
2059	2010-05-06 A. Martin Email CONFIDENTIAL
2060	2010-05-04 A. Martin Email CONFIDENTIAL
2061	2010-05-17 A. Martin Email CONFIDENTIAL
2062	2010-05-20 A. Martin Email CONFIDENTIAL
2063	2010-05-21 J. Kypuros Email CONFIDENTIAL
2064	2010-05-21 A. Martin Email CONFIDENTIAL
2065	2010-05-24 J. Kypuros Email CONFIDENTIAL
2066	2010-06-14 J. Kypuros Email CONFIDENTIAL
2067	2010-06-22 J. Kypuros Email CONFIDENTIAL
2068	2010-06-25 J. Kypuros Email CONFIDENTIAL
2069	2010-06-25 C. Tarawneh Email CONFIDENTIAL
2070	2010-06-29 J. Kypuros Email CONFIDENTIAL
2071	2010-06-29 J. Kypuros Email CONFIDENTIAL
2072	2010-07-06 A. Martin Email CONFIDENTIAL
2073	2010-07-13 A. Martin Email CONFIDENTIAL

2074	2010-07-14 J. Kypuros Email CONFIDENTIAL
2075	2010-07-24 C. Tarawneh Email CONFIDENTIAL
2076	2010-08-03 W. Lefebvre Email CONFIDENTIAL
2077	2010-08-03 C. Tarawneh Email CONFIDENTIAL
2078	2010-08-18 C. Tarawneh Email CONFIDENTIAL
2079	2010-08-24 J. Kypuros Email CONFIDENTIAL
2080	August 2010 ARX Engineering Status CONFIDENTIAL
2081	2010-08-25 C. Tarawneh Email CONFIDENTIAL
2082	2010-08-31 A. Martin Email CONFIDENTIAL
2083	2010-09-01 B. Wilson Email CONFIDENTIAL
2084	2010-09-20 C. Taraneh Email CONFIDENTIAL
2085	2010-10-06 A. Martin Email CONFIDENTIAL
2086	2010-10-19 C. Tarawneh Email CONFIDENTIAL
2087	2010-10-29 J. Kypuros Email CONFIDENTIAL
2088	2010-10-6 A. Martin Email CONFIDENTIAL
2089	2010-04-12 A. Martin Email CONFIDENTIAL
2090	Metadata for Glossary-Sept_2008 attached to Ex. 2047
2091	2010-04-12 M. Lehmer Email CONFIDENTIAL
2092	*Reserved*
2093	2010-11-01 A. Martin Email CONFIDENTIAL

2094	2010-11-01 C. Tarawneh Email CONFIDENTIAL
2095	2010-11-03 J. Kypuros Email CONFIDENTIAL
2096	2010-11-04 C. Tarawneh Email CONFIDENTIAL
2097	2010-11-08 C. Tarawneh Email CONFIDENTIAL
2098	2010-11-09 C. Tarawneh Email CONFIDENTIAL
2099	2010-11-05 A. Martin Email CONFIDENTIAL
2100	2010-11-06 A. Martin Email CONFIDENTIAL
2101	2010-11-08 M. Reed Email CONFIDENTIAL
2102	2010-11-08 A. Martin Email CONFIDENTIAL
2103	2010-11-26 C. Tarawneh Email CONFIDENTIAL
2104	2010-12-08 A. Martin Meeting Invite CONFIDENTIAL
2105	2010-12-01 A. Martin Email CONFIDENTIAL
2106	2010-12-06 C. Tarawneh Email CONFIDENTIAL
2107	2010-12-06 C. Tarawneh Email CONFIDENTIAL
2108	2010-12-18 C. Tarawneh Email CONFIDENTIAL
2109	2010-12-21 W. LeFebvre Email CONFIDENTIAL
2110	2011-01-05 J. Kypuros Email CONFIDENTIAL
2111	2011-01-06 J. Kypuros Email CONFIDENTIAL
2112	December 2010 ARX Engineering Status CONFIDENTIAL

2113	2011-01-13 J. Kypuros Email CONFIDENTIAL
2114	2011-02-14 A. Martin Email CONFIDENTIAL
2115	2011-02-14 A. Martin Email CONFIDENTIAL
2116	2011-02-16 A. Martin Meeting Invite CONFIDENTIAL
2117	2011-02-16 C. Tarawneh Email CONFIDENTIAL
2118	2011-02-17 A. Martin Email CONFIDENTIAL
2119	2011-02-17 C. Tarawneh Email CONFIDENTIAL
2120	2011-02-18 C. Tarawneh Email CONFIDENTIAL
2121	2011-02-18 A. Martin Email CONFIDENTIAL
2122	2011-02-21 C. Tarawneh Email CONFIDENTIAL
2123	2011-02-23 J. Kypuros Email CONFIDENTIAL
2124	2011-02-25 C. Tarawneh Email CONFIDENTIAL
2125	2011-03-02 A. Martin Meeting Invite CONFIDENTIAL
2126	2011-03-15 A. Martin Email CONFIDENTIAL
2127	2011-03-30 A. Martin Email CONFIDENTIAL
2128	2011-03-30 B. Wilson Email CONFIDENTIAL
2129	2011-03-30 W. LeFebvre Email CONFIDENTIAL
2130	2011-04-07 A. Martin Email CONFIDENTIAL
2131	2011-04-08 B. Wilson Email CONFIDENTIAL

2132	2011-04-14 C. Tarawneh Email CONFIDENTIAL
2133	2011-04-21 – A. Martin Email Email CONFIDENTIAL
2134	2011-04-20 J. Kypuros Email (forwarded to W. Lefebvre) CONFIDENTIAL
2135	2011-04-27 J. Kypuros Email (forwarded to W. Lefebvre) CONFIDENTIAL
2136	*Reserved*
2137	2011-05-04 C. Tarawneh Email CONFIDENTIAL
2138	2011-05-09 C. Tarawneh Email CONFIDENTIAL
2139	2011-05-16 C. Tarawneh Email CONFIDENTIAL
2140	2011-05-18 J. Kypuros Email CONFIDENTIAL
2141	2011-06-01 C. Tarawneh Email CONFIDENTIAL
2142	2011-06-15 C. Tarawneh Email CONFIDENTIAL
2143	2011-06-15 C. Tarawneh Email CONFIDENTIAL
2144	2011-06-15 C. Tarawneh Email CONFIDENTIAL
2145	2011-06-15 C. Tarawneh Email CONFIDENTIAL
2142	2011-06-15 C. Tarawneh Email CONFIDENTIAL
2146	2011-06-22 J. Kypuros Email CONFIDENTIAL
2147	2011-07-06 J. Kypuros Email CONFIDENTIAL
2148	2011-07-08 A. Martin Email CONFIDENTIAL
2149	*Reserved*
2150	2011-07-13 J. Kypuros Email CONFIDENTIAL

2151	2011-07-19 J. Kypuros Email CONFIDENTIAL
2152	2011-07-20 W. LeFebvre Email CONFIDENTIAL
2153	2011-07-27 C. Tarawneh Email CONFIDENTIAL
2154	2011-08-02 A. Martin Email CONFIDENTIAL
2155	Boomerang_Fall21_InfoSheet
2156	Hum Company Overview_Feb21
2157	Exhibit 15 to Declaration of Ryan Miller ISO Opposition to Motion to Stay Pending IPR Hum's Preliminary Counter-Infringement Contentions dated December 9, 2022
2158	Expert Declaration of Dr. Michael Shamos in support of Patent Owner's Motion to Amend
2159	Default Protective Order
2160	Declaration of Andrew Martin REDACTED Public version of Exhibit 2013
2161	Expert Declaration of Dr. Michael Shamos in support of Patent Owner's Response REDACTED Public version of Exhibit 2010
2162	Redlined Corrected Patent Owner's Response
2163	Expert Declaration of Dr. Michael Shamos in support of Patent Owner's Revised Motion to Amend
2164	Rebuttal Expert Declaration of Dr. Micheal Shamos in support of Patent Owner's Revised Motion to Amend
2165	April 18, 2024 Email from the Board Panel

2166[1]	Supplemental Monaco Declaration (Not Filed)
2167[1]	Supplemental Martin Declaration (Not Filed)
2168[1]	Declaration of Ryan N. Miller (Not Filed)

[1] Exhibits 2166-68 were originally served on November 9, 2023 as Exhibits 2163-65 to Petitioner as supplemental evidence in response to Petitioner's Objections to Evidence (Paper 20, October 26, 2023). Patent Owner inadvertently left these exhibits off its subsequently filed exhibit lists. This Updated Exhibit List corrects this error. Exhibits 2166-68 have been reserved on Petitioner to correct the exhibit numbers. They are otherwise identical to the declarations served as supplemental evidence on November 9, 2023.