



(51) International Patent Classification:

B61L 1/20 (2006.01) *B61L 27/00* (2006.01)
B61L 23/04 (2006.01) *B61L 29/22* (2006.01)

(21) International Application Number:

PCT/US2016/018199

(22) International Filing Date:

17 February 2016 (17.02.2016)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

14/635,136 2 March 2015 (02.03.2015) US

(71) Applicant: SIEMENS INDUSTRY, INC. [US/US]; 3333 Old Milton Parkway, Alpharetta, Georgia 30005-4437 (US).

(72) Inventor: HARP, Brian; 1848 McDonald Lane, New Albany, Indiana 47150 (US).

(74) Agent: KOWALEWSKI, Filip Aleksander; Siemens Corporation- Intellectual Property Dept., 3501 Quadrangle Blvd. Ste. 230, Orlando, Florida 32817 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: DETECTION OF DYNAMIC TRAIN-TO-RAIL SHUNTING PERFORMANCE

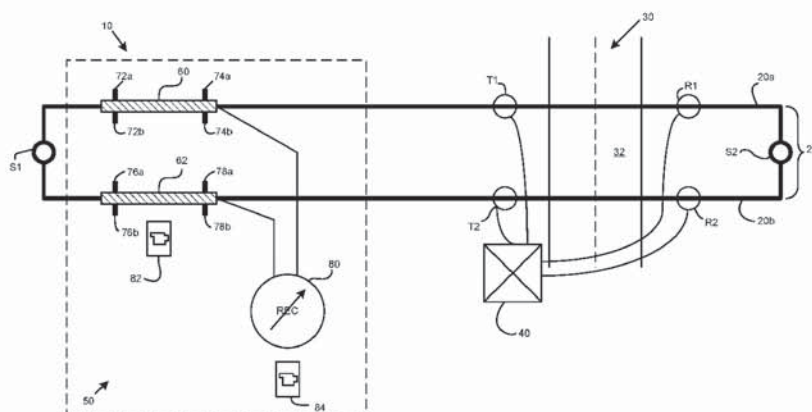


FIG. 1

(57) Abstract: Systems and methods for detecting the dynamic train-to-rail shunting performance of a train as it is moving along the rails of a railroad track. The systems and methods use portable equipment temporarily installed at a site where it is desired to test the shunting of one or more trains or the electrical equipment installed at the track. The systems and method use sensor plates and a high speed recording system to simultaneously capture measured train-to-rail shunting characteristics and the positioning of a trains axles and any rail conditions impacting the measurements. The captured information can be used to fine tune the train, the electrical equipment installed at the track and/or to design new devices.

PCT

(PCT Rule 92*bis*.1 and
Administrative Instructions, Section 422)

KOWALEWSKI, Filip Aleksander
Siemens Corporation- Intellectual Property Dept.
3501 Quadrangle Blvd. Ste. 230
Orlando, Florida 32817
ÉTATS-UNIS D'AMÉRIQUE

Date of mailing (<i>day/month/year</i>) 19 October 2016 (19.10.2016)	
Applicant's or agent's file reference 2015P00240WO	IMPORTANT NOTIFICATION
International application No. PCT/US2016/018199	International filing date (<i>day/month/year</i>) 17 February 2016 (17.02.2016)

1. The following indications appeared on record concerning:		
☒ the applicant	☐ the inventor	☐ the agent ☐ the common representative
Name and Address SIEMENS INDUSTRY, INC. 3333 Old Milton Parkway Alpharetta, Georgia 30005-4437 United States of America	State of Nationality US	State of Residence US
	Telephone No.	
	Facsimile No.	
	E-mail address	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning: ☐ the person ☐ the name ☒ the address ☐ the nationality ☐ the residence		
Name and Address SIEMENS INDUSTRY, INC. 100 Technology Drive Alpharetta, GA 30005 United States of America	State of Nationality US	State of Residence US
	Telephone No.	
	Facsimile No.	
	E-mail address ☐ Notifications by e-mail authorized	

3. Further observations, if necessary:
--

4. A copy of this notification has been sent to:		☐	the International Preliminary Examining Authority
☒	the receiving Office	☒	the designated Offices concerned
☐	the International Searching Authority	☐	the elected Offices concerned
☐	the Authority(ies) specified for supplementary search	☐	other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Blanc Veronique e-mail pt06.pct@wipo.int Telephone No. +41 22 338 74 06
--	---