

Title (en)

A method and installation for the measuring and extended monitoring of the stress state of a continuously welded rail (CWR)

Title (de)

Verfahren und Anlage zur Messung und erweiterten Überwachung des Spannungszustands einer Langschiene

Title (fr)

Procédé et installation pour la mesure et le suivi étendu d'un état de contrainte d'un rail soudé en continu

Publication

EP 2112047 A3 20100127 (EN)

Application

EP 09158205 A 20090420

Priority

IT VR20080047 A 20080421

Abstract (en)

[origin: EP2112047A2] A method of measuring the stress state of at least one rail of a continuously welded rail, comprising the steps of: prearranging: - one pair or a plurality of pairs of sensors: each pair including a first sensor (2b) designed to operate in response to temperature variations and a second sensor (2a) suitable for operating in response to temperature variations and longitudinal deformation in a rail section; - at least one emitter means (3) of at least one light energy beam arranged far from said one pair or plurality of pairs of sensors (2a, 2b); - at least one interrogation control unit (4) designed to receive said light energy beam that has passed through/been reflected by said one pair or plurality of pairs of sensors; - at least one unit (6) for processing the data collected by the control unit (4); and - at least one optical fiber (5): designed to optically connect at least one emitter means (3) with each sensor (2a, 2b) and with said interrogation control unit (4); energizing said at least one emitter means (3) in order to supply at least one light energy beam to one pair or to a plurality of pairs of sensors (2a, 2b); and processing the stress state of the rail by the at least one processing unit (6), on the basis of the signals received by the interrogation control unit (4).

IPC 8 full level

B61L 23/04 (2006.01)

CPC (source: EP)

B61L 23/044 (2013.01); **B61L 23/045** (2013.01)

Citation (search report)

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

EP 2112047 A2 20091028; EP 2112047 A3 20100127; EP 2112047 B1 20130626; ES 2428328 T3 20131107; IT VR20080047 A1 20091022

DOCDB simple family (application)

EP 09158205 A 20090420; ES 09158205 T 20090420; IT VR20080047 A 20080421