

Title (en)
SUCTION BELT CONVEYOR AND STRAND-FORMING MACHINE OF THE TOBACCO PROCESSING INDUSTRY, AND USE AND METHOD FOR MEASURING MATERIAL PROPERTIES OF A MATERIAL STRAND OF THE TOBACCO PROCESSING INDUSTRY

Title (de)
SAUGBANDFÖRDERER UND STRANGMASCHINE DER TABAK VERARBEITENDEN INDUSTRIE, VERWENDUNG UND VERFAHREN ZUM MESSEN VON MATERIALEIGENSCHAFTEN EINES MATERIALSTRANGS DER TABAK VERARBEITENDEN INDUSTRIE

Title (fr)
TRANSPORTEUR À BANDE D'ASPIRATION ET MACHINE DE FABRICATION DE BOUDINS DE L'INDUSTRIE DE TRANSFORMATION DU TABAC, UTILISATION ET PROCÉDÉ DE MESURE DES PROPRIÉTÉS MATÉRIELLES D'UN BOUDIN DE MATIÈRES DE L'INDUSTRIE DE TRANSFORMATION DU TABAC

Publication
EP 3297461 B1 20220824 (DE)

Application
EP 16713474 A 20160404

Priority
• DE 102015105353 A 20150409
• EP 2016057302 W 20160404

Abstract (en)
[origin: WO2016162292A1] The invention relates to a suction belt conveyor (160) of a strand-forming machine of the tobacco processing industry for conveying materials, in particular tobacco, comprising at least one strand guiding channel (100), which is open towards the bottom and which is delimited by two lateral channel sides (102, 104) and a suction belt (106) along a conveyor path (108). The invention also relates to a strand-forming machine of the tobacco processing industry and to a use and a method for measuring material properties of a material strand of the tobacco processing industry. According to the invention, at least one electromagnetic measuring device (200, 220, 240, 260) is integrated into the channel walls (102, 104) of the suction belt conveyor (160) in order to determine properties of the conveyed material at at least one position along the conveyor path (108).

IPC 8 full level
A24C 5/18 (2006.01); **A24C 5/34** (2006.01); **A24C 5/39** (2006.01)

CPC (source: EP KR US)
A24C 5/18 (2013.01 - KR US); **A24C 5/1857** (2013.01 - EP US); **A24C 5/3412** (2013.01 - EP KR US); **A24C 5/399** (2013.01 - EP)

Citation (examination)
US 4538453 A 19850903 - SIMMONS ALBERT [GB]

Citation (opposition)
Opponent : G.D S.p.A.
• DE 19825592 A1 19991216 - FOCKE & CO [DE]
• DE 3725366 A1 19890209 - HAUNI WERKE KOERBER & CO KG [DE]
• DE 69515482 T2 20001123 - MOLINS PLC MILTON KEYNES [GB]
• WO 0028615 A1 20000518 - KILDAL ANTENN CONSULTING AB [SE], et al
• EP 0908718 A1 19990414 - TEWS ELEKTRONIK [DE]
• WO 9112518 A1 19910822 - TEWS ELEKTRONIK [DE]
• WO 2009030314 A1 20090312 - TEWS ELEKTRONIK [DE], et al
• US 2005139282 A1 20050630 - JOHNSON RICHARD N [US], et al
• ANONYMOUS: "Why Measure Moisture using Microwaves?", HYDRONIX, WORLD LEADERS IN MICROWAVE MOISTURE MEASUREMENT, 28 July 2014 (2014-07-28), pages 1 - 1, XP093157213, Retrieved from the Internet <URL:https://web.archive.org/web/20140712202205/http://www.hydrnix.com/>
• ANDRZEJ W. KRASZEWSKI: "Microwave Aquametry - Needs and Perspectives", IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, vol. 39, no. 5, May 1991 (1991-05-01), pages 828 - 835, XP000201478, DOI: 10.1109/22.79110
• "Microwave Engineering - Passive Circuits", 1 January 1988, article PETER A. RIZZI: "Microwave Engineering - Passive Circuits", pages: 91 - 426-427, XP093157219
• ANONYMOUS: "Versuch 1.2: Hochfrequenzresonatoren", PHYSIKALISCHES PRAKTIKUM FÜR FORTGESCHRITTENE, TECHNISCHE UNIVERSITÄT DARMSTADT, INSTITUT FÜR KERNPHYSIK, 1 June 2012 (2012-06-01), pages 1 - 14, XP093157225

Designated contracting state (EPC)
AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)
DE 102015105353 A1 20161013; CN 107529813 A 20180102; CN 107529813 B 20211001; EP 3297461 A1 20180328; EP 3297461 B1 20220824; JP 2018511330 A 20180426; JP 7115854 B2 20220809; KR 102624354 B1 20240111; KR 20170134696 A 20171206; PL 3297461 T3 20230116; US 11178901 B2 20211123; US 2018027868 A1 20180201; WO 2016162292 A1 20161013

DOCDB simple family (application)
DE 102015105353 A 20150409; CN 201680020944 A 20160404; EP 16713474 A 20160404; EP 2016057302 W 20160404; JP 2017552801 A 20160404; KR 20177032194 A 20160404; PL 16713474 T 20160404; US 201715726926 A 20171006