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**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

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(54) **Title:** SUSTAINABLE CHEMICAL PROCESS FOR ISOLATION OF NAPHTHALENE SULPHONIC ACID COMPOUNDS WITH INHERENT RECYCLE OF ALL ACIDIC STREAMS GENERATED DURING ISOLATION AND WASHING

(57) **Abstract:** Isolation of Naphthalene Sulphonic Acid Compounds is achieved with acidification of alkali fusion mixture with dilute sulphuric acid to precipitation at the predetermined conditions temperature, time and pH and Naphthalene Sulphonic Acid Compounds is separated as a partial alkali metal salt by precipitation and separated by filtration. The resulting filtrate after recycle treatment containing soluble Naphthalene Sulphonic Acid Compounds and/or a salt thereof after recycle treatment is used as a starting reaction medium, top up reaction medium, dilution reaction medium for said subsequent isolation of Naphthalene Sulphonic Acid Compounds. Isolation of Naphthalene Sulphonic Acids can be achieved by two methods viz. forward isolation and Reverse isolate.

**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/IB2012/052072

**A. CLASSIFICATION OF SUBJECT MATTER**

INV. C07C303/06 C07C303/44 C07C309/35  
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 907 612 A (ALLIED CHEM) 10 October 1962 (1962-10-10) page 2, lines 31 - 94; examples, e.g. Example III; page 5, Table 1; claims -----	1-15
Y	GB 109 709 A (DENNIS LOUIS MUNROE [US]) 27 September 1917 (1917-09-27) page 3, lines 38 - page 4, line 10 ----- -/--	1-15

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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Date of the actual completion of the international search

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International application No  
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; ZHAO, HUILAN ET AL: "Apparatus for treating liquid waste from naphthalene sulfonic acid production through extraction", XP002684996, retrieved from STN Database accession no. 2010:1084869 abstract & CN 101 811 745 A (TIANJIN JIXINGJU CHEMICAL SCIENCE AND TECHNOLOGY CO., LTD., PEOP. REP.) 25 August 2010 (2010-08-25) -----	1-15

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No  
PCT/IB2012/052072

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 907612	A	10-10-1962	GB 907612 A	10-10-1962
			GB 907613 A	10-10-1962
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GB 109709	A	27-09-1917	NONE	
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