



## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 21 90 45 83

Classification of the application (IPC):  
E21B 47/06, E21B 47/10, E21B 43/16, E21B 47/26

Technical fields searched (IPC):  
E21B

| DOCUMENTS CONSIDERED TO BE RELEVANT |  |   |
|-------------------------------------|--|---|
| Category                            | Citation of document with indication, where appropriate, of relevant passages  | Relevant to claim                         |
| X<br>A                              | US 2019169982 A1 (HAUGE EINAR [NO] ET AL)<br>06 June 2019 (2019-06-06)<br>* paragraphs [0130] - [0187], [0197] - paragraph [0325]; figures 1-18 *  | 1-3, 6-15<br>4, 5                         |
| X<br>A                              | <b>S Wang ET AL:</b> "Leak Detection for Gas and Liquid Pipelines by Transient Modeling" <i>SPE</i> , 05 December 2006 (2006-12-05), pages 5-7<br>URL: <a href="https://onepetro.org/download/conference-paper/SPE-104133-MS?id=conference-paper/SPE-104133-MS">https://onepetro.org/download/conference-paper/SPE-104133-MS?</a><br>id=conference-paper/SPE-104133-MS<br>, DOI: 10.2118/104133-MS<br>[retrieved on 22 January 2019 (2019-01-22)]<br>XP055546243<br>* page 1; figures 1-14 * | 1, 2, 6-8,<br>10-12, 14, 15<br>3-5, 9, 13 |
| A                                   | WO 2015077768 A1 (SCHLUMBERGER CA LTD [CA]; SCHLUMBERGER SERVICES PETROL [FR] ET AL.) 28 May 2015 (2015-05-28)<br>* paragraphs [0050], [0094], [0102], [0117], [0132] - [0133], [0144]; figures 1-12 *   | 1-15                                      |

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

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|---------------------------|---|-------------------------|
| Place of search<br>Munich | Date of completion of the search<br>13 September 2024 | Examiner<br>Brassart, P |
|---------------------------|---|-------------------------|

### CATEGORY OF CITED DOCUMENTS

|   |  |
|---|--|
| X: particularly relevant if taken alone   | P: intermediate document   |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention                        |
| A: technological background   | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure   | D: document cited in the application                                   |
| & : member of the same patent family, corresponding document                    | L: document cited for other reasons                                    |

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## ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 21 90 45 83

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 13-09-2024  
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| Patent document cited<br>in search report | Publication<br>date | Patent family<br>member(s) | Publication<br>date |
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|   |                     | EP      3500725 A1         | 26-06-2019          |
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| WO2015077768      A1                      | 28-05-2015          | CN      105934689 A        | 07-09-2016          |
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