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| <b>(51) International Patent Classification <sup>6</sup> :</b><br><b>C07C 51/47, 53/08, B01J 31/40</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>A1</b> | <b>(11) International Publication Number:</b> <b>WO 97/15544</b>                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           | <b>(43) International Publication Date:</b> 1 May 1997 (01.05.97)                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>(21) International Application Number:</b> PCT/US96/16516<br><b>(22) International Filing Date:</b> 16 October 1996 (16.10.96)<br><br><b>(30) Priority Data:</b><br>08/549,609      27 October 1995 (27.10.95)      US<br><br><b>(71) Applicant:</b> HOECHST CELANESE CORPORATION<br>[US/US]; Route 202-206, Somerville, NJ 08876 (US).<br><br><b>(72) Inventors:</b> WARNER, R., Jay; 7402 Bourget, Corpus Christi,<br>TX 78413 (US). BROUSSARD, Jerry, A.; 7505 Venice<br>Drive, Corpus Christi, TX 78413 (US).<br><br><b>(74) Agents:</b> SPIERING, M., Susan; Hoechst Celanese Corporation,<br>1901 Clarkwood Road, Corpus Christi, TX 78409 (US) et<br>al. |           | <b>(81) Designated States:</b> AU, BR, CA, CN, CZ, HU, JP, KR, MX,<br>NO, NZ, PL, RU, SG, TR, TT, UA, VN, European patent<br>(AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU,<br>MC, NL, PT, SE).<br><br><b>Published</b><br><i>With international search report.<br/>         Before the expiration of the time limit for amending the<br/>         claims and to be republished in the event of the receipt of<br/>         amendments.</i> |
| <b>(54) Title:</b> PROCESS FOR IMPROVING PRODUCTIVITY OF A CARBONYLATION CATALYST SOLUTION BY REMOVING<br>CORROSION METALS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>(57) Abstract</b><br><br>A process for treating low water content carbonylation catalyst solutions which contain a rhodium component and an alkali metal component to remove metallic corrosion products is disclosed. The process comprises contacting the catalyst solution with an ion exchange resin, preferably in the lithium form, and a sufficient amount of water to decrease the concentration of alkali metal ions to optimize removal of corrosion metal products.                                                                                                                                                                                  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                   |