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㉑ An additive to metal cold rolling oil and a cold rolling oil composition containing the same.

㉒ This invention relates to a cold rolling oil additive and an emulsion type cold rolling oil composition. The additive according to the invention is a compound obtainable by reacting at least one member of polyalkylenepolyamines and polyalkyleneimines each containing 3 to 200 N atoms with at least one member of fatty acid compounds, glycidyl ether compounds and epoxy compounds. With this additive, cold rolling oil compositions having excellent lubricating and stable circulation characteristics can be easily obtained.

EP 0 349 787 A3



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X	CHEMICAL ABSTRACTS, vol. 93, no. 18, November 1980, page 145, abstract 93:170650z, Columbus, Ohio, US; R.J. HARTLE et al.: "Polyamine-Koch acid amides as dispersants for two-cycle engine oils" & J. AM. OIL CHEM. SOC. 1980, 57 (5), 156-9 * Whole abstract *	1,2,9, 10	C 10 M 133/08 C 10 M 133/16 C 10 M 141/06 C 10 M 141/08 C 10 M 141/10 C 10 M 149/12 C 10 M 119/04// C 10 M 173/00 C 10 N 30:04 C 10 N 40:24
X	US-A-4 705 643 (Th.E. NEMO) * Abstract; column 2, lines 3-58; column 3, line 29 - column 4, line 23, examples 1,2; claims 1-6 *	1,2,9, 10	
X	US-A-4 647 389 (Th.J. KAROL) * Abstract; column 1 - column 4, line 10, examples I, II; claims 2,3,6,7,11-14	1,2,9, 10	TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
X	US-A-4 551 257 (A.G. HORODYSKY) * Whole abstract *	1,9,10	C 10 M
X	AT-A- 350 162 (H. BEREUTER) * Whole document *	1,2,9, 10	
X	FR-A-1 318 311 (CALIFORNIA RESEARCH CORP.)	./.	
DISCLOSURE OF DOCUMENTS BY OTHER EXAMINERS			
Place of search THE HAGUE		Date of completion of the search 22-09-1989	Examiner FISCHER
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	



European Patent
Office

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid.
namely claims:
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

X LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions.

namely:

1. Claims 1,2,9,10
2. Claim 3
3. Claim 4
4. Claim 5,6,8
5. Claim 7

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid.
namely claims:
- None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims.
namely claims: 1,2,9,10



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
A	* Whole document * -- EP-A- 242 925 (THE NISSSHIN OIL MILLS LTD)	1,2,9, 10	TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
	* Whole document * ----	9,10	
DOCUMENTS CITED			
Place of search	Date of completion of the search	Examiner	
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	