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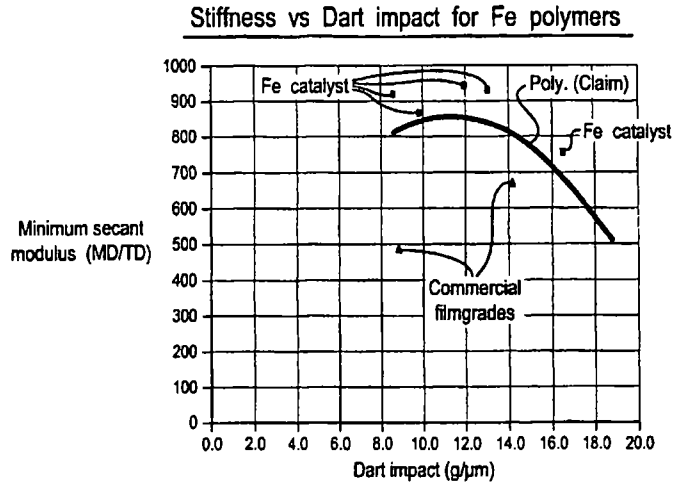
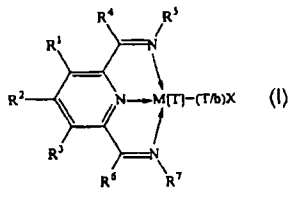
[Continued on next page]

(54) Title: POLYMERSATION PROCESS



In Fig.1 above: $M = -6.58D^2 + 148.82D + 20$
where
D = Dart impact in g/µm
M = Minimum (MD secant modulus / TD secant modulus)



(I)

(57) Abstract: A process for producing a polyolefin is disclosed, which comprises contacting at least one 1-olefin under polymerisation conditions with a polymerisation catalyst or catalyst system comprising (1) a compound having the Formula (I) wherein M is Fe[II], Fe[III], Co[I], Co [II], Co[III], Mn[I], Mn[II], Mn[III], Mn[IV], Ru[II], Ru[III], Ru[IV], V[II], V[III], V[IV], or V[V], Ti[II], Ti[III] or Ti[IV]; X represents an atom or group covalently or ionically bonded to the transition metal M; T is the oxidation state of the transition metal M and b is the valency of the atom or group X; R^1, R^2, R^3, R^4, R^5, R^6 and R^7 are independently selected from hydrogen, halogen, hydrocarbyl, substituted hydrocarbyl, heterohydrocarbyl or substituted heterohydrocarbyl; and when any two or more of R^1 - R^7 are hydrocarbyl, substited hydrocarbyl, heterohydrocarbyl or substituted heterohydrocarbyl, said two or more can be linked to form one or more cyclic substituents; and optionally (2) an activating quantity of an activator compound comprising a Lewis acid capable of activating the catalyst for olefin polymerisation; and then subjecting the resulting polyolefin to crosslinking conditions. The polymer produced can be formed into shaped articles or films with desirable physical properties.

WO 01/40323 A1

ACTION