

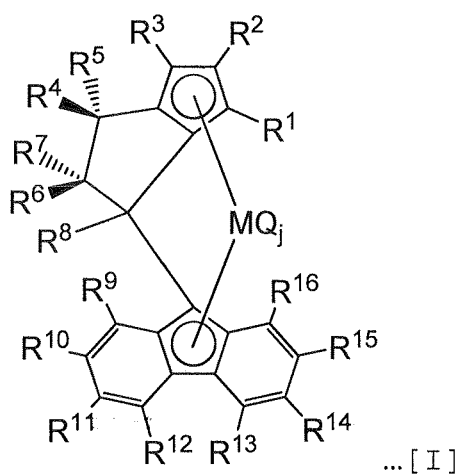
## ABSTRACT

[Problem to be solved]

There is provided a process for producing an olefin polymer that is capable of producing an olefin polymer having high heat resistance and high molecular weight with excellent catalytic activity.

[Solution to problem]

The process for producing an olefin polymer includes a step of polymerizing at least one olefin selected from ethylene and  $\alpha$ -olefins having 4 to 30 carbon atoms in the presence of an olefin polymerization catalyst containing a transition metal compound represented by the general formula [I], the olefin polymer including constituent units derived from ethylene and  $\alpha$ -olefins having 4 to 30 carbon atoms in a total amount between more than 50 mol% and not more than 100 mol%,



[in the formula [I],  $R^1$ ,  $R^3$  and  $R^5$  to  $R^{16}$  are each independently a hydrogen atom, a hydrocarbon group or the like;

$R^2$  is a hydrocarbon group or the like;  $R^4$  is a hydrogen atom; M is a transition metal of Group IV; Q is a halogen atom or the like; and j is an integer of 1 to 4].