

ABSTRACT

A metathesis catalyst which is a combination including a catalyst 1 comprising a compound that contains at least one metal element selected from tungsten, molybdenum and rhenium and a catalyst 2 comprising at least one selected from magnesium oxide and calcined hydrotalcite is easily and effectively reactivated from a degraded state due to long-term repetitive cycles of reaction and regeneration at high temperature for burning off poisonous substances or cokes, to like-new condition or a desired level. An olefin production process by a metathesis reaction includes a step of performing the reactivation.

A degraded metathesis catalyst is easily and effectively reactivated by being contacted with water at not more than 50°C or water vapor at not more than 170°C.