CLAIMS

1. Electrode for oxygen evolution in electrochemical processes comprising a valve metal substrate, a catalytic coating comprising a first layer of oxides of iridium and tantalum having a molar composition Ir 60-70%, Ta 30-40% referred to the metals and an external coating consisting of 2.9 to 3.5 g/m² of a valve metal oxide.

2. The electrode according to claim 1 wherein said valve metal oxide is selected from the group consisting of tantalum oxide, tin oxide and zirconium oxide.

3. The electrode according to claim 1 wherein said catalytic coating further comprises a second layer of oxides of iridium, tantalum and titanium having a molar composition Ir 76-84%, Ta 15-23%, Ti 0.2-1.3% referred to the metals interposed between said first catalytic layer and said external coating.

4. The electrode according to any one of claims 1 to 3 wherein said catalytic coating has a specific loading of iridium of 5 to 50 g/m².

5. The electrode according to any one of claims 1 to 4 comprising an intermediate protective layer based on oxides of titanium or tantalum interposed between said substrate and said catalytic coating.

6. The electrode according to claim 5 wherein said catalytic coating has a specific loading of iridium of 8 to 15 g/m².

7. Method of manufacturing an electrode according to any one of claims 1 to 6 comprising the formation of said external coating by application and subsequent thermal decomposition of a solution containing a precursor of tantalum or tin or zirconium.

8. Industrial electrochemical process comprising the anodic evolution of oxygen from an electrolytic bath on an electrode according to any one of claims 1 to 6.