ISO basic test methods for blast furnace iron ore pellets

Method name	Test name	Test designation	Pellet fraction for sample, mm	Sample weight/quantity, kg/piece	Temperature, °C	Composition of reducing gas, %				Test indicators
						CO	CO_2	H_2	N_2	
Physical properties										
ISO 4700	Determination of compressive strength	CS	10-12.5	60pcs	room	-	-	-	-	CS
ISO 4701	Determination of granulometric composition	-	all factions	according to ISO 3082	room	-	-	-	-	fractional composition by classes
ISO 3271	Determination of strength and abrasion coefficients	tumble strenght	6.3-40	15kg	room	-	-	-	-	index of tumle $TI_{+6.3}$ and abrasion index $AI_{-0.5}$
Metallurgical properties										
ISO 13930	Dynamic method for determining the fracture Index during recovery at low temperature	LTD	10-12.5 or 12.5-16	0.5kg	500	20	20	2	58	$LTD_{+6.3}$; $LTD_{-3.15}$; $LTD_{-0.5}$
ISO 4696-1	Determination of the fracture index after recovery at low temperature by the static method. Part 1. Reaction with CO, CO_2, H_2 and N_2	RDI	10-12.5	0.5kg	500	20	20	2	58	$RDI_{+6.3}$; $RDI_{-3.15}$; $RDI_{-0.5}$
ISO 4696-2	Determination of the fracture index after recovery at low temperature by the static method. Part 2. Reaction with CO and N_2	RDI	10-12.5	0.5kg	500	30	-	-	70	$RDI_{-2.8}$
ISO 4698	Method for determining the free swelling index	Free swelling	10-12.5	18pcs	900	30	-	-	70	V_{FS}
ISO 7215	Definition of recoverability by the index of the final degree of recovery	Reducibility	10-12.5	0.5kg	900	30	-	-	70	R_{180}
ISO 4695	Definition of recovery by the recovery rate index	Reducibility	10-12.5	0.5kg	950	40	-	-	60	(dR/dt) O/Fe=0.9
ISO 7992	Definition of recovery under load	RUL	10-12.5	1.2kg	1050	40	-	2	58	t80; ΔP80; Δh80; (dR/dt) O/Fe=0.9