The two pieces - a lightbox containing a photo of a boy on a beach and an 11-minute film of a dead horse lying in a meadow - will go on display at the Stedelijk Museum from 13 December.

The Dutch museum was one of the first in the world to focus on video art. McQueen's latest film, 12 Years a Slave, was named best picture on Sunday at this year's Academy Awards.

The 44-year-old won the prestigious Turner Prize in 1999, partly for a film in which he recreated a Buster Keaton stunt involving a falling house wall.

The first piece acquired by the Stedelijk is titled Mees, After Evening Dip, New Year's Day, 2002 and depicts a trembling boy on a beach with a towel clapsed around him. According to the museum, "the still image of the shivering Mees attains the status of a film projection, with the suggestion of movement and the passage of time".

The other piece, Rolling Thunder, is a 16mm colour film without sound in which the horse's lifelessness is signalled by a circling fly settling on its eyeball.

The museum calls its title "misleading, evoking associations with horse races, speed and (horse)power" while highlighting the "unanticipated tension" the static image provokes.

The Stedelijk already owns 7th Nov, a 2001 short in which McQueen's cousin Marcus tells of a fatal accident that changed his life forever.

In addition to winning the best picture Oscar, 12 Years a Slave received the best adapted screenplay prize and a best supporting actress award for cast member Lupita Nyong'o.

McQueen previously directed Hunger, about IRA hunger striker Bobby Sands, and Shame, a drama about a sex addict in which Michael Fassbender also played the lead role.