

Title (en)  
Method for subtitling cinematographic films

Title (de)  
Verfahren zum Untertiteln kinematographischer Filme

Title (fr)  
Procédé de sous-titrage de films cinématographiques

Publication  
**EP 0537068 B1 19960911 (FR)**

Application  
**EP 92402738 A 19921008**

Priority  
FR 9112580 A 19911011

Abstract (en)  
[origin: EP0537068A1] The process for subtitling cinematographic films intended to apply graphic components, characters or texts to a cinematographic film with the aid of a laser beam running over the region to be marked on the film comprises the following two stages: in a first stage, a laser etching operation is carried out by virtue of the application of a laser beam whose speed of travel at the film is between approximately 1cm/s and 200cm/s and whose power at the film is between approximately 100 milliwatts and approximately 20 watts, the S/P ratio of the speed of travel expressed in cm/s to the power at the film, expressed in watts, being between 10 and 30 and sufficiently high for the laser beam to perform a complete conversion of the emulsion in the etched regions by causing a heating, a softening and a dislocation of the emulsion without effecting a complete removal of this converted emulsion; and, in a second stage, the etched film is subjected to a treatment for cleaning the etched regions, especially by placing the film in contact with a bath which ensures the removal, in the regions of the film which were previously marked by the low-power laser beam, of the particles of emulsion which have been heated and dislocated by the laser beam, thus allowing transparent subtitles to appear.

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Citation (examination)  
US 4766009 A 19880823 - IMURA MIDORI [JP], et al

Cited by  
FR2803551A1; EP1039345A3; EP1039344A1; WO9610777A1

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