B[e] stars are a peculiar group of stars with forbidden emission lines in their spectra. This phenomenon is commonly ascribed as a result of a large shell around the star. FS Canis Majoris (FS CMa) became a prototype of one group of these stars because it was intensively studied in the past. However, in the case of this class of objects current theoretical models of the stellar evolution of a single star are not able to produce such huge amount of circumstellar matter, even if the stellar wind and rapid rotation are included into the calculations. We analysed and rectified some already reduced spectra obtained from 2005 to 2011 at the Astronomical Institute of the Academy of Sciences of the Czech Republic in Ondřejov and at SAAO observatory. Then we focused on the study of short- and long-term time variations of spectral lines in the stellar spectra, measured equivalents widths and radial velocities of the chosen spectral lines and discussed some achieved findings. Especially the short-term time variations of some spectral lines show dynamic processes of the inner star shell.