



EXPLORING STEEL ENERGY AND THE WEST



NUMBER SIX IN A SERIES OF 10

See the exhibit at www.pueblolibrary.org/exploringsteel

CF&I furnaces



ELECTRIC ARC FURNACES

Today, much of the electricity supplied by Xcel Energy's Comanche Generating Station to EVRAZ Rocky Mountain Steel is used in the electric arc furnace (EAF). The EAF does not require coking coal to achieve the temperatures needed to manufacture steel. Instead, the EAF at EVRAZ Rocky Mountain Steel uses a high voltage electrical current to melt existing steel. The electrical current is passed through large electrodes in a heat resistant enclosure that also holds the recycled steel to be melted. An arc takes place between the electrodes that releases an enormous amount of heat and melts the steel. The EAF is essential to the recyclability of steel. Today EVRAZ North America is one of Colorado's largest steel recyclers, recycling over one million tons of steel and scrap metal per year.