

FUNDAMENTAL MANUFACTURING PROCESSES

PLASTIC INJECTION MOLDING

SCENE 1.

CG: INJECTION MACHINE CONTROLS
white text centered on black

SCENE 2.

tape 400, 05:14:50-05:15:04
pull back of machine controls
tape 417, 12:07:55-12:08:02
swish pan from operator to
machine controls
tape 420, 03:10:19-03:10:25
pull out machine controls

NARRATION (VO) :

THE TYPE AND LOCATION OF MACHINE CONTROLS ARE
DEPENDENT UPON THE INJECTION MOLDING MACHINE.
THESE CONTROLS CAN VARY FROM ELECTROMAGNETIC
RELAYS AND TIMERS,
TO COMPUTER DRIVEN SOLID-STATE DEVICES.

SCENE 3.

tape 424, 18:09:59-18:10:16
zoom out, machine controls
CG, SUPER: Quality Control
Real-Time Reject
Recognition
Fault Analysis
Record Keeping
Instant/Accurate
Set-Up
build with red bullets

NARRATION (VO) :

THESE COMPUTERS NOT ONLY CONTROL THE PROCESS, BUT
PERFORM OTHER FUNCTIONS SUCH AS QUALITY CONTROL,
REAL-TIME REJECT RECOGNITION, FAULT ANALYSIS,
RECORD KEEPING AND INSTANT, ACCURATE SET-UP.

SCENE 4.

tape 421, 15:29:16-15:29:31
operator setting parameters,
starting injection cycle,
walking away

NARRATION (VO) :

AFTER THE MOLDING CONDITIONS ARE SET, THE MOLDING
MACHINE USES THE COMPUTER TO CONTROL THE SEQUENCE
OF OPERATIONS. THE CONTROLLER'S INSTANT FEEDBACK
SYSTEM PROVIDES BETTER PROCESS STABILITY THAN CAN
BE ACHIEVED BY HUMANS.

SCENE 5.

tape 426, 01:05:05-01:05:22
engineer monitoring entire plant
from single location

NARRATION (VO) :

COMPUTER CONTROLS CAN PROVIDE REAL TIME READOUTS
OF SYSTEM CONDITIONS FROM MULTIPLE LOCATIONS SO

THAT ONE ENGINEER CAN MONITOR AN ENTIRE PLANT.

SCENE 6.

tape 424, 18:09:24-18:09:41
controls keeping log of machine
activity, producing analysis

NARRATION (VO) :

CONTROLS CAN RECORD EVERY MOLDING CONDITION FOR
EACH INJECTION CYCLE, AND KEEP A LOG OF MACHINE
ACTIVITY. THIS DATA CAN BE USED TO ANALYZE
DOWNTIME AND MACHINE EFFICIENCY.

SCENE 7.

tape 397, 01:13:56-10:14:02
computer in use with designing
part for molding
tape 397, 01:06:45-01:06:49
computer in use with designing
mold

NARRATION (VO) :

ADDITIONALLY, COMPUTERS ARE USED FOR VARIOUS
ACTIVITIES THROUGHOUT THE DESIGN AND CONSTRUCTION
OF THE INJECTION MOLD.

SCENE 8.

tape 397, 01:09:37-01:09:48
simulation of injection process,
cut on action with next shot
tape 397, 01:08:38-01:08:44
c.u. simulation

NARRATION (VO) :

COMPUTER SOFTWARE PACKAGES CAN APPROXIMATE AND
VISUALIZE VARIOUS CONDITIONS WITHIN THE INJECTION
MOLD, PROVIDING VALUABLE FEEDBACK FOR THE PART AND
MOLD DESIGN.

SCENE 9.

tape 425, 19:04:13-19:04:23
engineer looking at mold drawing
machine of mold
tape 425, 19:01:56-19:02:04
machining of mold

NARRATION (VO) :

THESE PACKAGES CAN ALSO CONVERT DESIGNS INTO MOLD
DRAWINGS, AND PROVIDE PROGRAMMING DATA FOR
AUTOMATIC MACHINING OF THE MOLD BASE, CAVITIES AND
CORES.

--- FADE TO BLACK ---