Quiz 020612 (MATLAB)

Write a script which can be employed to locate any region of a temperature variable from the kiln data runs and plot the data in this region.

For example: Suppose you wish to see the data t1 (interior top zone temperature) between 1.0 h and 2.0 h.

Use your script to locate the first ramp period for the bisque run data.

Send your results to placetd@auburn.edu

%% Locate Data Interval (locDataInterval)

% Used to locate and plot data in a specific interval of time

clear; clc;

load ('bisque\_data.mat')

%% Pull out the interior temperature of the top section

y = temp\_int\_top; % temp values in F

x = t; % time values in hours

plot(x,y) % just viewing the available data

%% Establish beginning and ending time values

start = 13; % these can be varied in cell mode

finish = 19; % these can be varied in cell mode

N = length(x);

m=0;

clear xx % these prevent stale data from being plotted or used

clear yy

for k = 1:N

 if x(k) >= start && x(k) <= finish

 m = m + 1;

 xx(m) = x(k);

 yy(m) = y(k);

 end

end

plot (xx,yy)

%% At this point, you can use xx and yy as desired

Another solution uses the idea of logical arrays for extracting values.

Replace above

for k = 1:N

 if x(k) >= start && x(k) <= finish

 m = m + 1;

 xx(m) = x(k);

 yy(m) = y(k);

 end

end

with

xx=x(x>=start&x<=finish);

yy=y(x>=start&x<=finish);