Accura Surveys Ltd.

Dimensional Control Consultants

Chartered Surveyors

RICS

XXXXX BestFit Software training

13-15 April 2015

Day 1

a) Introduction and software review (location of software, folders, tutorial, menus, popup & undo)
b) Explain gsi format, coord file & survey file (open with notepad)
c) Circle fitting, levelling, flatness and making vertical - exercises 2 & 3
d) BestFit configuration (tolerance setting and logging) - exercise 6
e) Review prisms, spikes, retros, reflectorless. Practical - spike calibration
f) Basic introduction to codes (start and end). Use of one file for day / project
g) Download raw co-ordinate file - exercise 5 (explain multiple set-ups in one file)

Lunch break

h) Practical – survey control, circle fit & download data
i) Explain use of alignment of points (create 2 pts in new file – align to N & level)
j) Use of multiple alignment – exercise 4 (spool)
k) Explain point naming (ie P001.1, T01, C001.1) , circle fitting and control
l) Explain 2D and 3D fit of co-ordinate files. When used. Exercise 9
m) Practical exercise - instrument checks, calibration, FL/FR readings to tape, linking 2 set-ups.
n) Fitting to design / creating datums for structure – first part of exercise 7

Day 2

a) Review of previous day
b) Exercise 10 (independent). Review pt setting and alignment.
c) Discuss use of compensator (vibration & inclined set-ups)
d) Discuss locating errors in fits & transfering control between levels
e) Discuss flange point naming and basic calculations - exercise 11
f) Practical – survey spool with flanges from single set-up
g) Discuss flange angle calculations / presentation of results – exercise 12 & 13
h) Review use of drawing template – SR draw up previous exercise.

Lunch break

i) Practical survey of spool with survey widgets and drawing flange angles.
j) Review use of pipe data pro to find flange type and sizes
k) First part of exercise 16
l) Plotting in Cad – exercise 15. Try flange mirror.
m) Review bearing & distance & grid vertical angles
n) Reflectorless surveys (explain approach to circle fitting– when to use), fixed rad - exercise 17
o) Explain use of roll back – exercise 19 (circle fitting, circle fits on line and use as a reference)
p) Reporting of results – examples folder , deviation arrows, drawing template, report template

Day 3

a) Review of previous day
b) Combining all methods – exercises 26
c) Field work notes, calculations and checking – discuss.
d) Discuss red-line mark-ups and use of PipeData – exercises 30
e) Importing raw data as H, V, Slope Distance – exercise 23 (why use?)
f) Reflectorless pipework surveys – exercise 27 & 28
g) Reflectorless practical outside.

Lunch break

h) Discuss shrinkage, standard temperature and scaling.
i) Use of BestFit line – data file in tutorial folder. Show explamples of results – alignment radii
j) Explain bundle fit – why use. Exercises 21 & 22
k) Structure inclination & pitch & roll. Exercise 8 (time pending).
l) Discuss weighted BestFit briefly.
m) Recap and any questions.