



S A D S

What's New

Version 20.0

Gold Sun

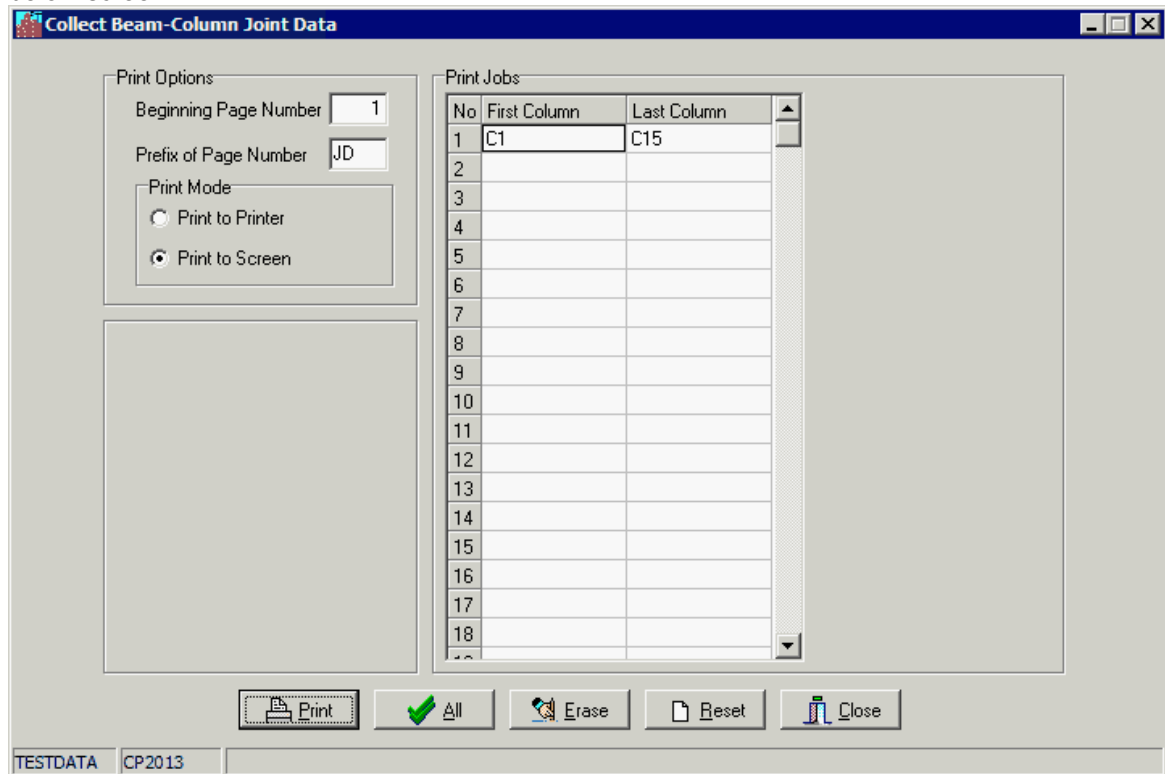
January 2019

Table of Contents

| | |
|--|----------|
| Foreword | 0 |
| Part I Collection of Joint Data | 1 |
| Part II Advanced Joint Analysis | 1 |
| Part III Prior Acceptance of Joint Design | 1 |
| Part IV Prior Acceptance of Gravity Load Collection | 1 |
| Part V Consider The Eccentricity of Beam Loading | 2 |
| Part VI Compare SADS versions | 2 |
| Index | 0 |

1 Collection of Joint Data

In **SADS v20**, the joint data is mainly collected from column data. It does not need the moment envelop and beam reinforced bars data. Do we redesign the Collect Joint Data Sub-command as below screen.



SADS v20 collects joint data from column data and checks these data with beam batch data to make sure the collected data are consistency.

2 Advanced Joint Analysis

We improve the analysis and design of beam-column joint. The method is matched with Code of Practice for Structural Use of Concrete 2013 - CoP 2013 and Amendments to Code of Practice for Structural Use of Concrete 2013. Also, the results of the design is reasonable and acceptable.

3 Prior Acceptance of Joint Design

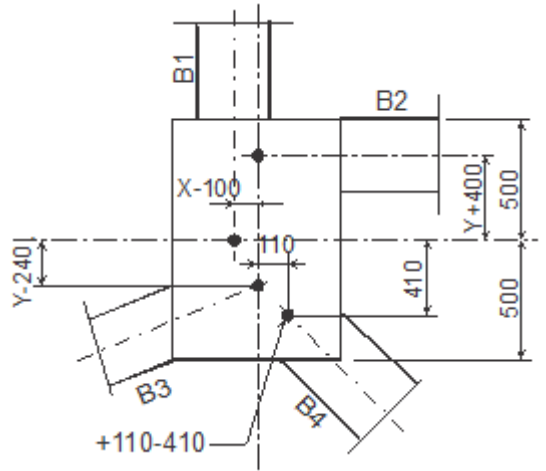
We have submitted the Beam-Column Joint Design Program to BD. for prior acceptance. This submission was approve on 28 September, 2018. The BD Reference Number is S1012.

4 Prior Acceptance of Gravity Load Collection

We have submitted the Gravity Load Collection Program to BD. for prior acceptance. The program includes the gravity load collection of columns and walls This submission was approve on 28 December, 2018. The BD Reference Number is S1016.

5 Consider The Eccentricity of Beam Loading

In column design, SADS v20 can consider of the eccentricity of beam loading as additional of design moments.



There is new field "Eccentric" in Connected Beams data.

If the load center of connected beam is sitting on the center of column section, enter "N" to this field. Otherwise, you must enter the location of load center to this field. There are 2 method to define the load center. The first method is looking for the location of the first intersection point of beam center line and column section center line, e.g. beam B1, B2 and B3. You can enter the "X" or "Y" plus "+" or "-" plus the value of eccentricity to the field, i.e. X-100, Y+400 and Y-240. The second method is used for connected beam in diagonal direction only and you can define the location of load center by yourself, e.g. beam B4. You can enter "+" or "-" plus the value of eccentricity in X-X direction plus "+" or "-" plus the value of eccentricity in Y-Y direction to this field, i.e. +110-410.

After you enter this new data, SADS can calculate the additional design moment and take account to column design.

6 Compare SADS versions

| | SADS v12 | SADS v15 | SADS v16 | SADS v17 | SADS v18 | SADS v19 | SADS v20 |
|----------------------------------|----------|----------|----------|----------|----------|----------|----------|
| CoP 2004 | OK | OK | OK | OK | OK | OK | OK |
| CoP 2011 | NO | OK | OK | OK | OK | OK | OK |
| CoP 2013 w/o FLS | NO | NO | OK | OK | OK | OK | OK |
| CoP 2013 Full | NO | NO | NO | OK | OK | OK | OK |
| CoP 2013 Amentmends | NO | NO | NO | NO | NO | OK | OK |
| Online Link to ETABS | NO | NO | NO | NO | OK | OK | OK |
| Advanced Joint Analysis | NO | NO | NO | NO | NO | NO | OK |
| Deflection by Curveture | NO | NO | NO | NO | OK | OK | OK |
| Alternative Database | NO | NO | NO | NO | NO | OK | OK |
| Prior Acceptance of Joint Design | NO | NO | NO | NO | NO | NO | OK |
| Prior Acceptance of gavity Load | NO | NO | NO | NO | NO | NO | OK |