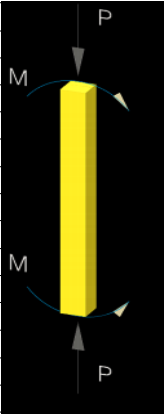
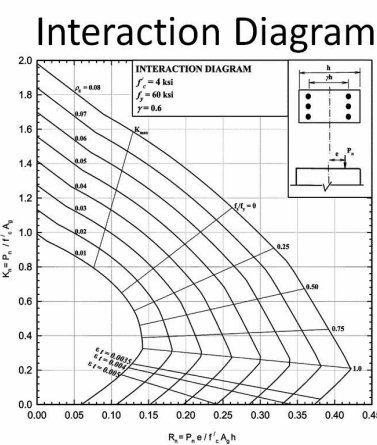


HP-35s Calculator Program – ECCENTRICALLY LOADED REINFORCED CONCRETE COLUMN DESIGN

Author: J. E. Charalambides

Date: Friday, November 28/2014

© 2014 J. E. Charalambides

Line	Instruction	Process	User Instruction
A001	LBL A	Establishing the library	
A002	ECC LOADED COL		
A003	PSE		
A004	CONC KSI		
A005	PSE		
A006	INPUT F	Input the strength (f _c) of the concrete mixture	
A007	MOMENT		
A008	PSE		
A009	INPUT M	Input the moment applied in kip feet	
A010	AXIAL LOAD		
A011	PSE		
A012	INPUT P	Input the applied axial load P in kips	
A013	÷	Solving for eccentricity	
A014	12		
A015	×		
A016	STO E		
A017	VIEW E	Viewing eccentricity value in inches	
A018	INPUT B	Input the base width (b) of the column	
A019	INPUT H	Input the length (h - in plan) of the column (not the l _u)	
A020	×	Calculating Gross Cross Sectional Area	
A021	STO A	Storing value of Gross Cross Sectional Area of Column	
A022	RCL F	Calculating the Kn value for the interaction diagram	
A023	×		
A024	1/x		
A025	RCL P		
A026	×		
A027	0.65		
A028	÷		
A029	STO K	Saving the Kn value in variable K	
A030	RCL M	Solving for the Rn value for the interaction diagram	
A031	RCL A		
A032	÷		
A033	RCL F		
A034	÷		
A035	RCL H		
A036	÷		
A037	12		
A038	×		
A039	0.65		
A040	÷		
A041	STO R	Saving the Rn value in variable R	
A042	COVER (CNTROID)	Computing the γ ratio of centroids	
A043	PSE		
A044	INPUT C	Input the value of the cover (xtreme fiber to centroid) in	
A045	2		
A046	×		
A047	+/-		
A048	RCL H		
A049	+		
A050	RCL H		
A051	÷		
A052	STO G	Storing the value of γ in variable G	
A053	GAMMA FOR DIAG		
A054	PSE		
A055	VIEW G	Viewing the value of γ	
A056	LOAD AXIS		
A057	PSE		
A058	VIEW R	Viewing the variable R to use on Load axis (abscissa)	
A059	MOM AXIS		
A060	PSE		
A061	VIEW K	Viewing the variable Kn for the Moment axis (ordinates)	

A062	RHO FROM DIAG		
A063	PSE		
A064	INPUT R	Input the ρ value 1%-8% as derived from graphs	
A065	RCL A		
A066	x		
A067	STO S	Storing the required steel in variable S	
A068	AS		
A069	PSE		
A070	VIEW S	Viewing the area of steel required for longitudinal reinf.	
A071	STOP		