

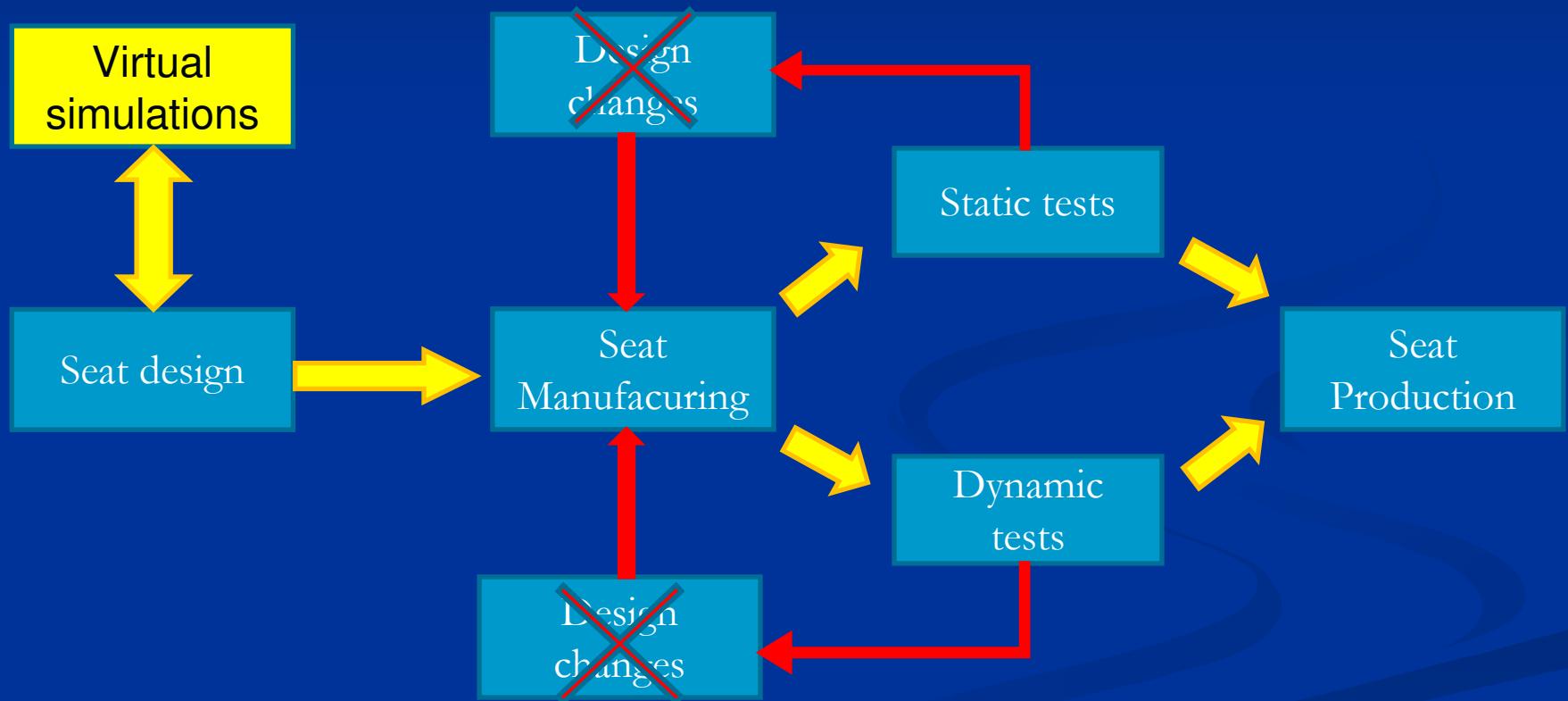
ACRA

Cabine Crashworthiness Prediction



Ing. Zdenek Mikulka, Ing. Ladislav Chybík

Today's and new seat development process



Research of methodology of aircraft seat dynamic calculation

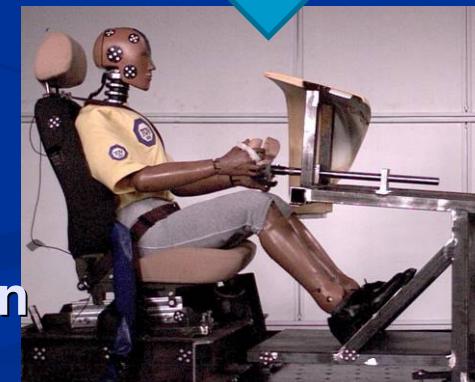
Goal:

- Solver tests
- Methods of Finite Element Model building
- Comparation of test and simulation



Output

- Methodology of aircraft seat dynamic calculation



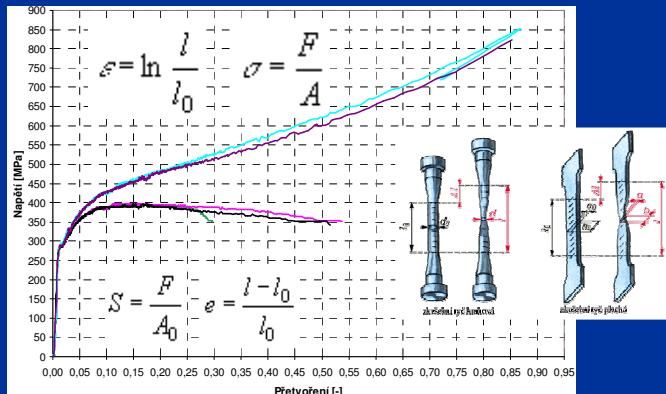
Research of aircraft material properties

Goal:

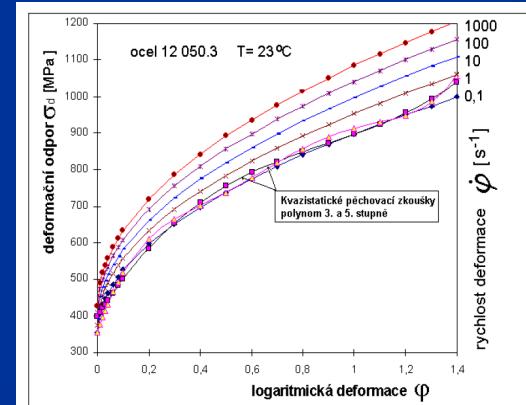
- Database of aircraft materials properties for simulations

- true stress / true strain
- strain rate
- damage

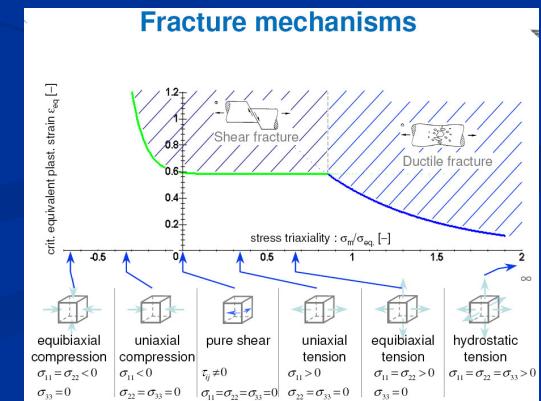
true stress/strain



strain rate



damage



Consortium

Country	Participant	Full name	Responsible pers.
A	AIT	Austrian Institute of Technology GmbH	Miroslav Henzel
CZ	BUT	Brno University of Technology	Jaroslav Juračka
I	CIRA	Centro Italiano Ricerche Aerospaziali	Umberto Mercurio
DE	DLR	Deutsches Zentrum für Luft- und Raumfahrt	Marius Lützenburger
CZ	EVE	Evektor	Ladislav Chybík
NL	NLR	Nationaal Lucht- en Ruimtevaartlaboratorium	Toni Kanakis
I	OMASUD	O.M.A. SUD SPA	Stefano Fico
I	PIAGGIO	PIAGGIO AERO INDUSTRIES S.P.A.	Mario Roma
I	POLIMI	Politecnico di Milano	
A	ViF	Kompetenzzentrum - Das Virtuelle Fahrzeug Forschungsgesellschaft mbH	Thomas Jost
CZ	VZLU	AERONAUTICAL RESEARCH AND TEST INSTITUTE	Josef Jironč

ACRA Project structure

WP No	Name of WP	Activity Type	Participant Short Name
0	Management	MNG	EVEKTOR
1	Definition of reserche items	RD	OMASUD
2	Material performace reserch	RD	CIRA
3	Structure design development	RD	EVEKTOR
4	Testing	RD	OMASUD
5	Simulations	RD	NLR
6	Evaluation, validation	RD	EVEKTOR

ACRA Status

- Consortium closed
- Work packages defined
- Milestones and deliverables partly defined
- Work package leaders defined
- Work distribution and responsibilities under development
- Budget re-distribution under development
- Targeted budget : 3.2 - 3.5 M€



Thank you

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