

# DIN EN 1994-1-2:2010-12 (E)

## Eurocode 4: Design of composite steel and concrete structures - Part 1-2: General rules - Structural fire design (includes Corrigendum AC:2008)

---

<b>Contents</b>		<b>Page</b>
<b>Section 4 Design procedures</b> .....		<b>43</b>
4.1	<b>Introduction</b> .....	<b>43</b>
4.2	<b>Tabulated data</b> .....	<b>44</b>
4.2.1	<b>Scope of application</b> .....	<b>44</b>
4.2.2	<b>Composite beam comprising steel beam with partial concrete encasement</b> .....	<b>45</b>
4.2.3	<b>Composite columns</b> .....	<b>47</b>
4.3	<b>Simple Calculation Models</b> .....	<b>51</b>
4.3.1	<b>General rules for composite slabs and composite beams</b> .....	<b>51</b>
4.3.2	<b>Unprotected composite slabs</b> .....	<b>51</b>
4.3.3	<b>Protected composite slabs</b> .....	<b>52</b>
4.3.4	<b>Composite beams</b> .....	<b>53</b>
4.3.5	<b>Composite columns</b> .....	<b>61</b>
4.4	<b>Advanced calculation models</b> .....	<b>64</b>
4.4.1	<b>Basis of analysis</b> .....	<b>64</b>
4.4.2	<b>Thermal response</b> .....	<b>65</b>
4.4.3	<b>Mechanical response</b> .....	<b>65</b>
4.4.4	<b>Validation of advanced calculation models</b> .....	<b>65</b>
<b>Section 5 Constructional details</b> .....		<b>66</b>
5.1	<b>Introduction</b> .....	<b>66</b>
5.2	<b>Composite beams</b> .....	<b>66</b>
5.3	<b>Composite columns</b> .....	<b>67</b>
5.3.1	<b>Composite columns with partially encased steel sections</b> .....	<b>67</b>
5.3.2	<b>Composite columns with concrete filled hollow sections</b> .....	<b>67</b>
5.4	<b>Connections between composite beams and columns</b> .....	<b>68</b>
5.4.1	<b>General</b> .....	<b>68</b>
5.4.2	<b>Connections between composite beams and composite columns with steel sections encased in concrete</b> .....	<b>69</b>
5.4.3	<b>Connections between composite beams and composite columns with partially encased steel sections</b> .....	<b>70</b>
5.4.4	<b>Connections between composite beams and composite columns with concrete filled hollow sections</b> .....	<b>70</b>