```
min_el_sound  THM

⊢  ∀E:(ℕ→ℕ→𝔹), n:ℕ. (EquivRel x,y:ℕ. x E y) ⇒ (n E Min{ x | xEn })
| by UnivCD THEN Unfold ‘min_el‘ 0
|
1. E : ℕ→ℕ→𝔹
2. n : ℕ
3. EquivRel x,y:ℕ. x E y
⊢  n E MinArg(E(n) : {0..n+})  by Unfold ‘infix_ap‘ 0
|
⊢  E(n,MinArg(E(n) : {0..n+}))
| by RWH
|    (LemmaC
|     Thm* ∀f:(ℕ→𝔹), n:ℕ. f(MinArg(f : {0..n+})) = f(n)
|     {min_arg_sound})
|    0
|
⊢  E(n,n)  by Analyze 3
|
3. Refl(ℕ;x,y.x E y)
4. Sym x,y:ℕ. x E y & Trans x,y:ℕ. x E y
⊢   by Unfold ‘refl‘ 3
|
3. ∀a:ℕ. a E a
4. Sym x,y:ℕ. x E y & Trans x,y:ℕ. x E y
⊢   by BackThru 3
END
```